Appendix D

Town and Regional Plan Excerpts: Orderly Development

Town of Alburgh

Town Plan

Adopted July 26, 2011

minimum state standards for wastewater disposal are met.

Objectives:

N 3. Develop Town owned lakeshore in Alburgh Center.
N-4 Improve and develop additional bicycle-friendly facilities and address the need for safer bicycle routes through town

Land Use

Goals:

Maintain economically and environmentally sound farms in Alburgh.

To preserve and protect scenic resources, including significant scenic roads, waterways and views, and important landscape features of the town.

To ensure that development in Alburgh is compatible with existing land uses.

To ensure that development occurs in areas where it will not impact water quality.

To ensure that development occurs only in those areas where soils are capable of supporting it with adequate depth to bedrock, stability and which do not have high water tables.

Policies:

L-A. Discourage the subdivision of land into "spaghetti" lots, parcels of land that are exceptionally long and narrow.
L-B. Support the conservation of agricultural lands and natural resources with a variety of strategies including purchase of development rights and local policies that encourage conservation.
L-C. Protect water quality by limiting development in Wellhead Protection Areas, wetlands and along streambanks.
L-D. Protect Lake Champlain water quality by discouraging development along the lakeshore closer than 50 feet from the high water mark of 99 feet above sea level.

In contrast to the open lands of the interior, Alburgh has a distinct pattern of built-up areas. Alburgh Village is the largest cluster of mixed use buildings in town, consisting of a variety of residential, retail and commercial uses. Immediately adjacent to the Village is the Alburgh Business Park.

The Village is not the only high density area in town. Reflecting past history, Alburgh contains a number of high density clusters around the town, notably in East Alburgh, Alburgh Springs, and Alburgh Center. Alburgh's more recent history as a vacation destination has led to extremely high density development along much of Alburgh's shoreline. Structures along the shore tend to be built on very small lots and reducing the impact of this development on Lake Champlain's water quality is a challenge.

There is also an extensive amount of conserved land in town. Alburgh Dunes State Park occupies a 608 acre piece of land at the southernmost section of the town. The Vermont Land Trust and other conservation groups have also purchased conservation easements on an assortment of agricultural lands in town. These conserved lands can be seen on the *Proposed Land Use* map.

Proposed Land Use

Future land use in Alburgh was based on a combination of existing land uses, desired growth areas, conserved lands and underlying natural resource characteristics. Using these criteria, proposed future land use was divided into eight general land use categories. The land use categories are described below and the general boundaries are illustrated on the map titled *Proposed Land Use*.

1) Village and High Density Residential – This land use category includes most of the existing Village area, as well as other existing high density areas in the town. Intended uses of these areas include high density residential development and commercial uses compatible with residential development. Commercial uses should be of a scale and

character compatible with residential development. Existing land uses in these areas are grandfathered. Minimum lot width is 100 feet.

2) Shoreland – This land use category includes all land within 300' of mean high water that is not either in the Village/High Density category or either Conservation Land A or B. The intended land uses in this category are residential, recreation, conservation uses. Protection of Lake Champlain water quality is a high priority and development should seek to minimize impact on the lake. Existing land uses in these areas are grandfathered.

To protect lake water quality a 50 foot undeveloped and vegetated buffer strip is required for new development, measured from the high water mark of 99 feet above sea level. The minimum lot width is 100 feet.

3) Commercial Area – This land use category covers the areas designated for commercial development. Commercial development includes land uses such as small gas stations, gift shops, retail stores, farmer's markets and Park & Ride facilities. Currently, the Commercial Area is situated at the "Four Corners" located at the intersection of Rt. 78 and Rt. 2. The boundaries of the area are 350 feet from the road centerline in all directions, forming a diamond pattern extending 350 feet from the intersection.

4) Industrial Area – This land use category follows the lines of the existing Industrial Park in Alburgh Village.

Land uses included in this district include light and heavy industry, manufacturing and commercial uses. All uses must be compatible with the residential and commercial nature of the adjoining Village area.

5) Agriculture and Low Density Residential Area – This land use category extends 300 feet on either side of all town and state-owned roads. It does not include land that is in either the Village/High Density areas, the Commercial area, the Industrial area or Conservation Lands A and B.

Intended land uses in these areas include low density residential development and agriculture. The minimum lot width in this area is 250 feet.

6) Conservation Lands A – This land use category includes lands that are unsuitable for residential, commercial or industrial development because of natural resource limitations, primarily wetlands.[1] No further residential, commercial or industrial development should

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[1] *Wetlands were determined based on the U.S. Fish & Wildlife Service National Wetland Inventory (NWI) maps. These maps were developed from color infrared aerial photos flown between 1975 and 1978, U.S. Geological Service topographic maps and other mapped and text data. The data was digitized by the Vermont Center for Geographic Information and released in 1996. Wetlands less than 3 acres in size were not included in this dataset. This information was the best computerized data available that could be accessed by the Planning Commission at the time this Plan was developed. These wetland maps were developed for planning purposes only. Questions regarding official wetland boundary determinations should contact the Vermont Agency of Natural Resources, Water Quality Division, Wetlands section, (802) 244-6951*

occur in these areas. Primary land use is wildlife habitat and recreational uses compatible with the sensitive environment of this area. Such uses include hunting, bird-watching and hiking.

7) **Conservation Lands B** - This land use category includes lands that have been conserved by federal, state or private non-profit groups. These lands include prime agricultural soils, important wildlife habitat, and shore land areas.

Development on these lands should be minimal, limited by the conservation restrictions and/or management plans that place conservation of either agricultural soils, wildlife habitat, water quality or low impact recreation as their primary aim.

8) **Agriculture and Open Space** – This land use category includes all lands not included in other categories. The majority of these lands are in agricultural use and should remain available for agriculture. Lands in this category are distant from existing roads and development could entail increased costs to the town if municipal services are extended into these areas.

Primary use of these lands should be agriculture and recreational open space. Residential development in this district should be clustered to avoid impacting agricultural operations. Conservation of these lands is strongly encouraged.

Chapter 9. Energy

Energy production is essential to human society and, at the same time, threatens the environment that sustains us. Most energy sources have negative environmental impacts and the challenge for the future will be to reduce energy consumption in general, and to shift demand from the more harmful energy sources toward those that are renewable and have an overall low environmental impact. Energy conservation is an important step in developing a comprehensive energy plan for the future of Alburgh.

Land use and energy are closely related. Land resources are used in the production, transport, and disposal of energy products. Land use patterns exert a strong influence on major end uses of energy, including transportation, heating and cooling of buildings, and the energy used in developing infrastructure. Furthermore, land is used for the disposal of waste products resulting from our energy consumption.

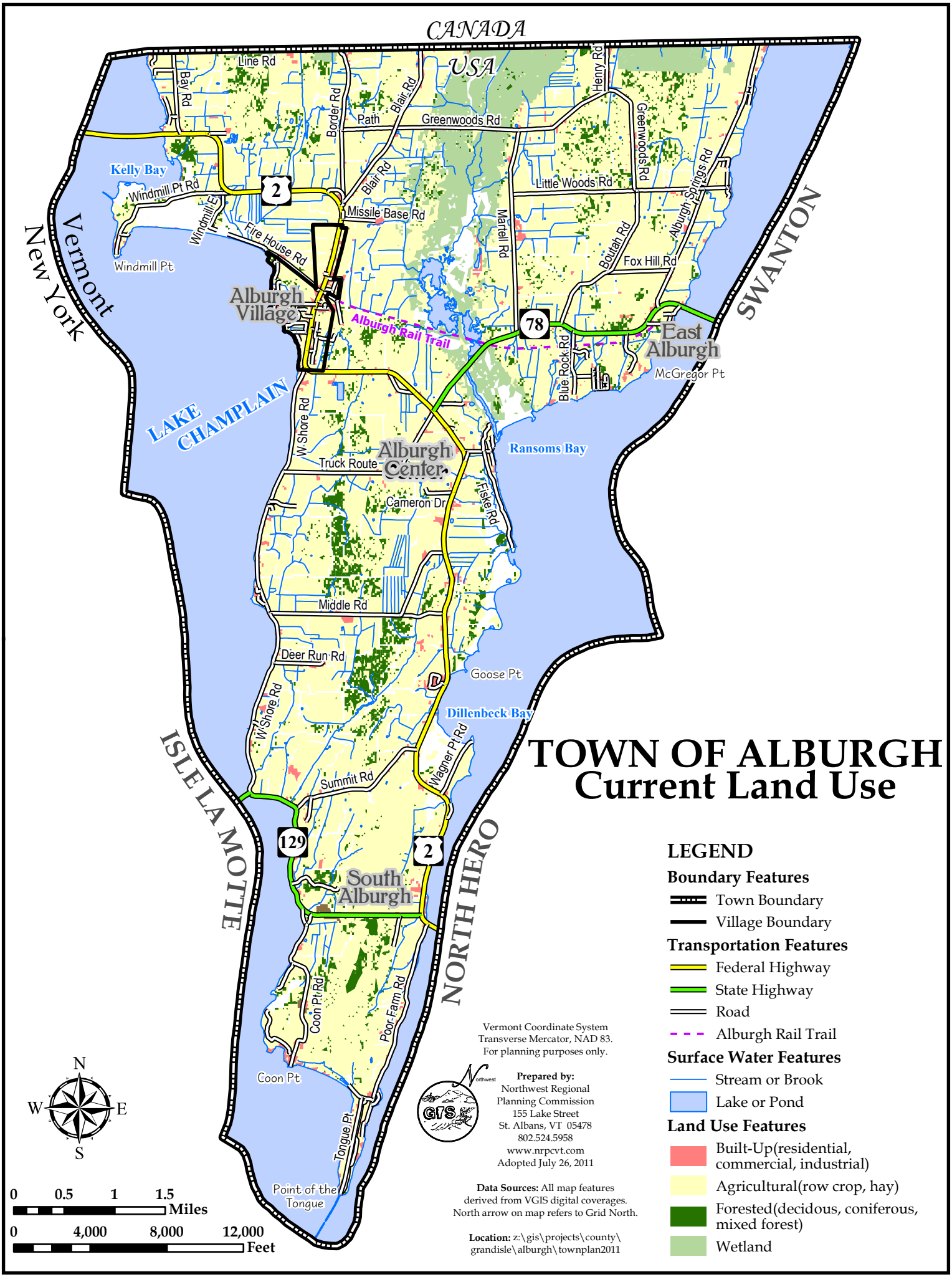
Vermont's energy use is divided into three main sectors: residential, commercial, and industrial. However, because the amount of energy that is used in transportation is significant, it is sometimes analyzed as a separate sector. In 2006, for the Northwest Region of Vermont, transportation consumed just over 57 percent of the total delivered energy while the residential sector consumed nearly 34 percent, the commercial sector along with the industrial sector consumed a combined amount of 8.5 percent (NRPC Regional Plan, 2006).

Local Energy Consumption

Table 1. Housing Units by Heat Source, 2009

	Alburgh	Grand Isle County	Vermont
Utility gas	18	36	35,478
Bottled, tank, or LP gas	150	873	37,569
Electricity	30	104	10,321
Fuel oil, kerosene, etc.	548	1830	134,100
Coal or coke	0	0	434
Wood	79	270	29,603
Solar energy	0	0	102
Other Fuel	0	15	1,744
That Are not Heated	0	0	1,024

Source: 2005-2009 American Community Survey



TOWN OF ALBURGH
Current Land Use

LEGEND

Boundary Features
- Town Boundary
- Village Boundary

Transportation Features
- Federal Highway
- State Highway
- Road
- Alburgh Rail Trail

Surface Water Features
- Stream or Brook
- Lake or Pond

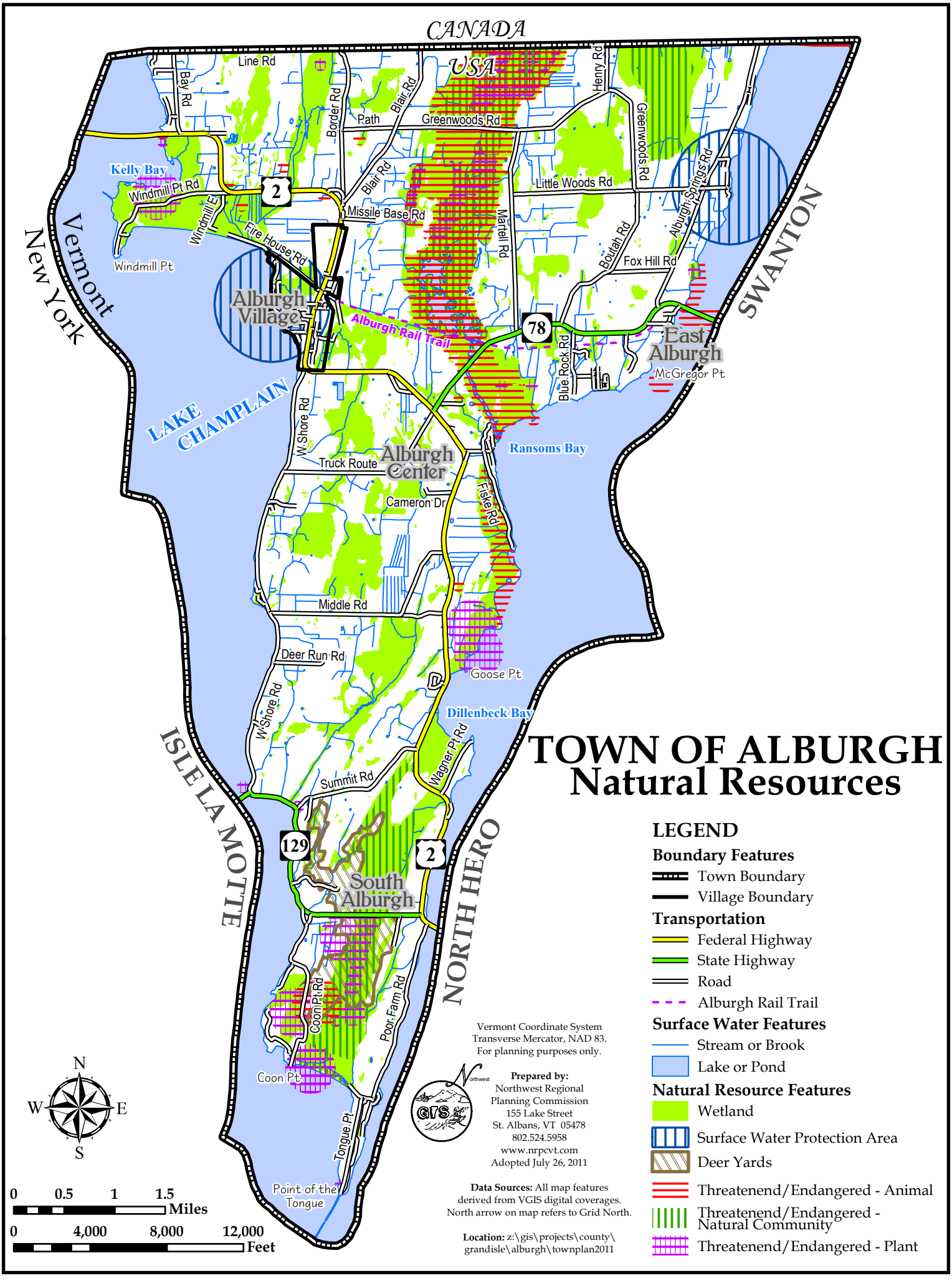
Land Use Features
- Built-Up(residential, commercial, industrial)
- Agricultural(row crop, hay)
- Forested(decidous, coniferous, mixed forest)
- Wetland

Vermont Coordinate System
Transverse Mercator, NAD 83.
For planning purposes only.

Prepared by:
Northwest Regional Planning Commission
155 Lake Street
St. Albans, VT 05478
802.524.5958
www.nrpcvt.com
Adopted July 26, 2011

Data Sources: All map features derived from VGIS digital coverages. North arrow on map refers to Grid North.

Location: z:\gis\projects\county\grandisle\alburgh\townplan2011



TOWN OF ALBURGH
Natural Resources

LEGEND

Boundary Features
- Town Boundary
- Village Boundary

Transportation
- Federal Highway
- State Highway
- Road
- Alburgh Rail Trail

Surface Water Features
- Stream or Brook
- Lake or Pond

Natural Resource Features
- Wetland
- Surface Water Protection Area
- Deer Yards
- Threatenend/Endangered - Animal
- Threatenend/Endangered - Natural Community
- Threatenend/Endangered - Plant

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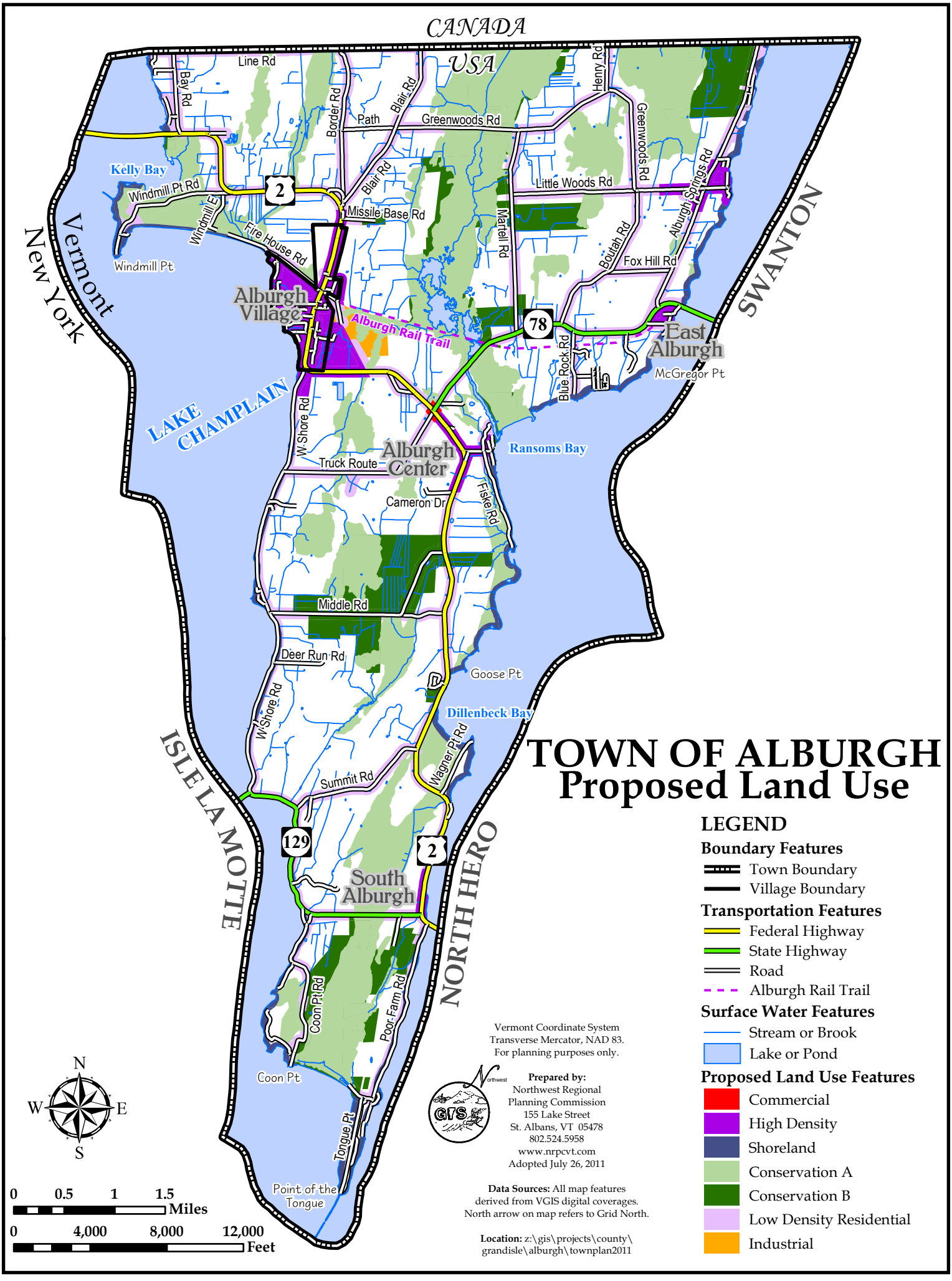

TOWN OF ALBURGH
Proposed Land Use

LEGEND

Boundary Features
- Town Boundary
- Village Boundary

Transportation Features
- Federal Highway
- State Highway
- Road
- Alburgh Rail Trail

Surface Water Features
- Stream or Brook
- Lake or Pond

Proposed Land Use Features
- Commercial
- High Density
- Shoreland
- Conservation A
- Conservation B
- Low Density Residential
- Industrial

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Town of Benson
Comprehensive Town Plan

Adopted April 1, 2013

Households and Household Size

Table 4: Number of Households			
	1990	**2000**	**2010**
Benson	312	391	420
Rutland Region	23,525	25,678	25, 984
% Change	**1980-90**	**1990-00**	**2000-2010**
Benson	40.54%	25.32%	7.4%
Rutland Region	15.01%	9.15%	1.2%
Source: U.S. Census Bureau			

Table 5: Average Household Size				
	1990	**2000**	**2010**	*2020 Projection*
Benson	2.71	2.57	2.46	*2.35*
Rutland Region	2.71	2.39	2.28	*2.17*
Source: U.S. Census Bureau				

Average household size in Benson was 2.46 in 2010, slightly above the regional average. Household size is expected to continue to decline over the next 10 years. This, in combination with continued population growth, will result in an increasing number of households and housing units. The population of Benson is projected to increase minimally over the next 10 years, but the number of households is projected to rise by a greater percentage.

Goals of the Town of Benson

Given this history and current trends, the future will require careful planning. To further the needs of the community identified by the Commission, the Plan has been drafted to.

- Preserve the Town's rural character.
- Protect and promote traditional and diversified agricultural uses and activities.
- Protect the Town's natural resources and environment.
- Protect and improve water quality.
- Protect the Town from sprawl.
- Protect the Town from development that puts undue burden on the capacity of Town roads, water, sewer and other infrastructure and the capacity of the environment to support these developments.
- Promote only development that meets the needs of the present without compromising the ability of future generations to meet their own needs.
- Encourage the wise use of energy resources.
- Promote a healthy economy.
- Promote safe and decent housing for current and future residents.
- Sustain the Town's heritage.

ENERGY

The electricity provided to Benson comes from a combination of nuclear, hydropower, and a small percentage of fossil fuels.

Heat is primarily provided by wood, oil and propane. It is important to consider and encourage other forms of energy, where cost effective. It is also important to ensure that energy use and development does not produce any negative impact to the Town, the environment, and natural resources in Benson.

The Town recognizes the relationship between energy, transportation and land use and that transportation is a significant user of energy in Town. However, Benson is a rural community with minimal services, no public transportation and minimal employment opportunities. There is no pattern of land use appropriate for the Town that would have a significant impact on transportation energy use.

Electrical Utility Service

Green Mountain Power provides electrical service to the Town.

Wind Power

Many areas of Benson are suitable for erecting wind turbines to produce electricity. The zoning and subdivision bylaw requires conditional approval for small wind towers. Of particular concern is the fact that the guy wires that support the tower are a great hazard to birds that fly at night. With little extra effort, towers can be constructed such that these wires are unnecessary, or greatly reduced in number.

In addition, the concern of the visual appearance of industrial scale wind towers should be addressed so as not to destroy the natural beauty of the Town. This means limiting the erection of towers on ridges and in areas of historic or environmental significance. Wind towers tied to the grid require a state permit and those off the grid are regulated through zoning. Wind towers should fit into the natural landscape as much as possible.

Solar

Solar power is under utilized in Benson. Solar gain is used effectively in this climate in the winter to heat homes and to provide hot water, both with fossil fuel back up. In addition, most of the year, it is feasible to utilize solar electric panels to generate electricity. The power produced by solar panels will meet a greater part of the home electricity needs if energy efficiency measures are taken first. Unlike wind and hydro, the collection of solar radiation does not pose environmental concerns. The Town encourages the use of solar energy and encourages energy efficient appliances, as well as insulation and weather stripping.

Hydro

There are many sites in Benson that could be considered for generating electricity from running water using a micro hydro turbine. There is, however, an environmental concern. Construction in streams requires state permits and a conditional use permit under the zoning and subdivision bylaw.

Other

Fossil fuels are provided by competitive suppliers; and alternative fuels, such as wood, are widely available locally. Benson currently does not have other utilities such as natural gas. A net metering program exists in Vermont for residential and farm properties. Further information is available from the Public Service Board.

Methane Digestion

Farmers have the potential to develop farm energy systems that utilize the anaerobic digestion of agricultural products, byproducts or wastes to produce electricity or produce electricity from other renewable sources. The use of such technologies not only provides a source for renewable electricity, it also helps to improve environmental quality through better waste utilization while promoting local economic activity that helps to diversify farm operations.

Energy Efficiency

There are cost-effective ways to reduce energy use in homes and businesses. Energy efficiency investments will pay off now and in the future, by reducing energy costs and protecting our environment. Energy efficiency programs and services are available from Efficiency Vermont, the statewide certified energy efficiency utility. Bennington Rutland Opportunity Council (BROC) and Neighborworks of West Rutland have programs to assist residents of Benson with energy conservation and weatherization measures to reduce energy costs.

Energy Goals, Policies and Programs

- Encourage individual, non-profit, and governmental efforts to conserve energy supplies such as by the use of energy efficient appliances, and insulation and weatherization of residential, commercial and Town buildings.
- Encourage the development and use of renewable energy (including but not limited to wind, solar, micro-hydro, and methane generation) where such installations will not adversely affect the environment or scenic beauty in Benson.
- Provide information to residents about programs and means to reduce energy consumption.
- The Town should investigate funding opportunities for cost effective energy efficiency, alternative energy and renewable energy programs.

EDUCATION

To meet growing demands for elementary education, and to resolve building code and accreditation issues, the Town opened its new Village School on School Street in 1993. High school students from Benson attend Fair Haven Union High School (FHUHS) in Fair Haven. The Town provides transportation to and from FHUHS. Residents from Benson have access to Stafford Technical Center in Rutland as well.

Benson Village School is an approximately 10,000 square foot wood-frame building. A bond of $600,000.00 will be paid off in 2013. The school building currently contains 10 classrooms for

NATURAL RESOURCES

(*see Natural Resources Map)*

The Town of Benson has a wealth of naturally occurring resources that enrich our lives. These natural resources include a broad spectrum of everything around us, such as, water, soil, trees, wildlife and the beauty of the area. It is our responsibility to identify these resources and maintain and create an environment that doesn't interrupt the balance of their existence.

In the past, there was a unique woodland in Benson as well as in other Towns in the Champlain Valley. The remnants of this natural community have been called Clayplain Forest. This forest is identified by its history of having once been an ancient lake bed, its soils, the local climate, the types of vegetation and the animal populations supported.

The fertile clay soil and the warmth of the Champlain Valley allow this area to support several tree and shrub species which exist at the northern extent of their range. Four different oak species, as well as hickory, beech, maples, and a host of other trees and shrubs make this the most diverse woodland in the Northern Hardwood Forest. This was a very productive forest that supported a large population of animals.

Since this area of Vermont has fertile, clay-based soil, it was and is prized for agriculture. Forest clearing was completed in the 1850s, and today we have no examples of old growth forest in the Champlain Valley. What remains today are rare examples of natural regeneration in a highly altered and fragmented landscape. The majority of the fragments of this forest type are limited to areas that are less than 100 acres. This fragmentation limits the long standing viability of this forest.

Within Benson, restoration efforts are taking place to bring this forest back. The Southern Lake Champlain Valley Program of The Nature Conservancy and the Poultney-Mettowee Watershed Partnership have been working together to supply native plants grown from local seed sources for local ecological restoration and vegetative buffer plantings. Several landowners in Benson have signed up for federal cost-share programs to address natural resource concerns by restoring riparian areas to the natural vegetative condition. These federally funded stream bank protection programs include the Partners For Fish and Wildlife and Conservation Reserve Program.

The goal of this restoration project is to mitigate the adverse impacts of adjacent land uses on fish and wildlife habitat, which also results in improved water quality. At the same time, we have the opportunity to work at restoring clay plain forests in some of the areas where it once existed. The restoration effort will also expand the wooded corridor along our local rivers, stabilize the riverbanks, help decrease erosion, and help reduce sedimentation that is adversely impacting our water quality. Game and non-game animal species will benefit from these efforts, sustaining and increasing their populations.

The Nature Conservancy and the State have identified several significant natural and fragile areas in Benson. The Nature Conservancy has conserved several parcels and the State either owns or has participated in conservation efforts. The Town for the most part relies on The Nature Conservancy and the State to identify those areas that meet significant criteria and should be conserved. In addition, Benson has been identified as an important corridor for wildlife between the Green Mountains and the Adirondacks. While our plan does not specifically protect specific areas, our policy of supporting The Nature Conservancy, Land Trust and State conservation efforts, our 20 acre density requirement to preserve open lands and forest and our publicizing the importance of maintaining wildlife corridors has this effect.

Some of the significant areas protected include Shaw Mountain, parts of Mill Pond shoreline and marsh, Pond Woods Wildlife Recreation Area, and Benson lands in Bomoseen State Park. Efforts are underway with Town support to conserve additional significant lands along the Lake Champlain shoreline and Sunset Lake shoreline.

Climate, Topography, & Geology

Benson has a favorable growing season (according to the State of Vermont, Fish and Wildlife Department's Nongame and Natural Heritage Program), though it gets very cold in winter due to air drainage from the surrounding higher areas. Benson has slightly less rainfall than much of the state, and is well suited to agriculture. Maps are attached depicting agricultural soil and wetlands. Benson has great biodiversity, both diversity of species, as well as genetic diversity of individuals within species, due to the unique climate and soil types that exist here. For these reasons, conservation is very important to this area.

Agriculture, Forestry and Mineral Resources

Benson's forestland is vital to the Town in many ways. Commercial timber production has been operating for many years. This timberland has also served as a source of habitat for wildlife, recreation, aesthetics and watershed protection. The wealth of wild game that has supported hunting in this area is due largely to this forestland. . There are several operating sawmills in Town.

There are several active gravel pits and areas where shale is mined on the surface as well as other mineral deposits. They have been very important in supplying material for Town roadwork as well as for private driveways.

The soil on which our farming industry is based has been mapped and areas that are classified as prime agricultural land have been identified. Relatively recently Benson has transformed from a community of many small dairy farms to only seven (7) operating dairy farms. Some remaining open lands are utilized by active farms, but we have seen the loss of agricultural land to primary and secondary residences on subdivided lots, which was land that historically was farmed.

We are now seeing diversified agricultural use of our land. There are beef raising enterprises, horse farms, vegetable farms, sheep operations, hay growing enterprises, farm food stands, honey production enterprises, and maple syrup production operations. The economic value of the forest products and agricultural products produced in Town are a major portion of our economic base. The emphasis of our land use regulations and Town Plan in maintaining the Benson landscape is our primary method of ensuring a continuing agricultural and forestry industry in Benson.

Water Resources

Lakes, ponds, streams and wetlands have been placed on topographic maps and there has been renewed interest in their importance since they support a great diversity of plants and wildlife and provide recreation and other opportunities. The various waterway flood plains are critical areas that also need attention. These are locations along streams and rivers that, due to low elevation, can flood easily which have also been mapped (see maps).

Open Space and Scenic Resources

Protecting Benson's open spaces and scenic resources for the enjoyment of present and future generations is a priority where consistent with efficient highway maintenance and safety considerations. Benson's diverse landscape includes rich agricultural lands, scenic ridges and wooded hills, unique wildlife habitats, streams and lakes, historic areas, and tree lined roads. A prime goal is to preserve and enhance Benson's uniqueness.

The Town has chosen not to specifically identify specific scenic roads, waterways and views but rather to consider the totality of the Town as such. These sites are far too numerous in Benson. Rather the Town has chosen to protect these sites by the 20 acres density requirement in the Land Use Regulations, the policy of no new roads and the restrictions on any major development. In addition, infrastructure limitations also protect these resources. Benson is a Town with tight clay soils and the cost of community water and waste facilities is prohibitive which discourages development

The Use Value Program was established by the legislature "to encourage and assist in the maintenance of Vermont's productive agricultural and forest land." Other stated anticipated outcomes include conservation, preservation, and protection of land and prevention of accelerated conversion to more intensive use.

The Vermont Land Trust has conserved many farms in Benson. Similarly, The Nature Conservancy has purchased land in Benson, and bought the conservation easements on land in Benson. The Poultney Mettowee Natural Resources Conservation District is protecting and replanting the clayplain forest in Benson. The Town should continue to support such efforts, especially when they protect water quality, watersheds, wetlands, and ecosystems.

Conservation Commission

State statute enables Towns to establish Conservation Commissions of 3-9 members. Conservation Commissions are advisory not regulatory in nature. The Town of Benson has opted not to establish a Conservation Commission.

Natural Resources Goals, Policies and Programs

1. Agriculture and Forestry

    - Support small and family farms and encourage development of additional small and family farms.
    - Encourage farming that provides a local food source to Town residents.
    - Support the conservation of land for agricultural usage.
    - Support clayplain forest restoration.
    - Encourage landowners to preserve trees and other vegetation in existing clay plain forest fragments.
    - Encourage the expansion of a "wooded corridor" that connects clayplain forest fragments along the edges of streams and rivers.

2. Water Resources

- Encourage the protection of the quality of ground water and water of our lakes, natural ponds, streams and rivers to protect drinking water, swimming, recreation, wildlife habitat, and fish consumption.
- Support the Partners For Fish and Wildlife project to protect stream and river banks.
- Encourage landowners to create buffer zones between waterways and agricultural and silvicultural land.
- Limit development along waterways, lakes and ponds.
- Discourage the use of pesticides and herbicides that contaminate water (both ground and surface waters).
- Protect wetlands from degradation.

3. Flood Hazard Areas

- Control development within the flood plain zones and enforce Town Flood Hazard Regulations.

4. Fragile, Unique Habitats and Open Space and Scenic Resources

- Preserve and enhance Benson's uniqueness.
- Encourage the identification and protection of ecosystems for rare, threatened and endangered species, environmentally fragile areas, critical wildlife habitats, wildlife corridors and unique natural areas in Benson, with the cooperation of landowners.
- Support efforts for ecological restoration.

5. Additional Goals

- Promote proper habitat for wild game and maintenance of naturally occurring plants and animals.
- Promote the preservation of lands and resources for recreational purposes.
- Support State efforts for compliance with State and Federal air quality regulations.

Unemployment Rate

Year	Unemployment Rate		
	Benson	*Rutland County*	*Vermont*
2000	2.6%	3.0%	2.7%
2001	2.8%	3.5%	3.3%
2002	3.8%	4.1%	4.0%
2003	3.5%	4.9%	4.5%
2004	2.8%	4.1%	3.7%
2005	2.4%	3.7%	3.5%
2006	2.6%	4.0%	3.7%
2007	2.4%	4.3%	3.9%
2008	3.2%	5.3%	4.5%
2009	6.8%	8.3%	6.9%
2010	6.6%	7.4%	6.4%
2011	5.9%	6.7%	5.6%
Source: VT Department of Labor			

According to the 2010 American Community Survey 5-Year Estimates, of the approximately 821 residents in Benson over 16 years of age, 535 were in the labor force. Forty were unemployed, which represented 4.9% of the civilian labor force. There were 286 people in Benson over the age of 16 who were not in the labor force.

Economic Development Goals, Policies and Programs

Tourism and agriculture are of importance to Benson's economy. Tourism brings customers to many of the Town's businesses; and for this reason, the Town's rural and scenic character and the well preserved ambiance of its village should be a consideration in land use decisions. There are 22 farms according to the most recent Listers' data and 14 woodland properties in the Town of Benson.

While Benson is a farming community, the Town also supports a range of other businesses and pursuits. There are 16 commercial properties and one commercial apartment in the Town of Benson according to the most recent Listers' data. The number of commercial properties has increased by 60% during the last 10 years. Business growth over the last decade has been steady, and additional businesses may move to the Town in the future. The most promising and undeveloped aspect of the local economy relates to tourism and recreation. The Town recognizes that tourism and agriculture are closely linked; and that the number of tourists will not increase if Benson's open and beautiful scenery is not maintained. The Town's economic goals are consistent with maintaining Benson's current landscape and maintaining environmental standards.

To improve Benson's economic base:

- Encourage the development of home occupations and cottage industries.
- Encourage the expansion of local businesses.
- Maintain the village core, the character of the Town, and the landscape and natural resources.

- Conditionally permit future small commercial and light industrial developments that are consistent with the Town's rural character and complementary to its agricultural heritage.
- Discourage future large commercial and heavy industrial developments that are inconsistent with the Town's rural and agricultural character.
- Protect, preserve and conserve available agricultural lands and forests, encouraging land conservation efforts by Vermont Land Trust and The Nature Conservancy.
- Permit additional agricultural and forestry land uses and activities within the Town.

Green Mountain Council Exemption from Taxation

In 1967 the Vermont Legislature exempted property owned by the Boy Scouts of America from local property taxes. Green Mountain Council owns 193.8 acres of waterfront property in Benson. This exemption has resulted in a loss of property tax revenues to Benson in excess of $500,000 between 1967 and 2007. Benson believes it is inequitable for the State to require a few Towns to carry the burden of this tax exemption for the entire state. The Selectboard supports the possibility of amending the PILOT program during the appropriation process to compensate the few impacted Vermont Towns.

LAND USE AND GROWTH

In order to incorporate the goals, objectives and recommendations set forth within this Plan, attached to this Plan are a collection of land use maps which identify current agricultural areas, public investments (including Town highways and Public Facilities), residential, recreational, forest, and commercial land uses. These maps also indicate flood plains, soils, topography, wetlands, critical wildlife habitat, conservation areas, designated village center, sewer district, and a future land use map. The future land use map shows the intended land uses, which are consistent with the designated zoning districts.

The Plan anticipates the use of the above maps as aids to guide the development of land within Benson. Consistent with the Plan, land uses are encouraged that will conform with the goals set forth below.

Existing Conditions

The Town consists of rural agricultural land and natural areas. The Village area is a mix of closely spaced commercial and residential uses. There are clusters of closely spaced residential structures in several other areas of Benson, including around Sunset Lake, and Perch Pond, as well as along areas of Route 144, Howard Hill Road, and at Benson Landing.

Benson has adopted a zoning and subdivision bylaw, last amended November 21, 2011. In addition, there are ordinances pertaining to driveway installations, road standards, placement of junk motor vehicles, floodplain regulations, traffic, and mobile home and trailer coach parks. Additional State land use regulations exist, though the Town does not have the authority to enforce these laws; the Town has opted to be a 1-acre Town for the purpose of commercial development under Act 250.

Table 6: 2012 Grand List					
	1990	**2002**	**1990-2002 % Change**	**2012**	**2002-2012% Change**
Residential parcels* under 6 acres	89	115	29.2%	140	21.7%
Residential parcels on 6 acres or more	58	132	127.6%	160	21.2%
Mobile Homes without land	31	40	29.0%	18	-55%
Mobile Homes with land	24	58	141.6%	71	12.24%
Vacation Parcels under 6 acres	111	84	-24.3%	67	-20.24%
Vacation Parcels on 6 acres or more	35	28	-20.0%	28	0.0%
Commercial Properties	8	10	25.0%	16	60%
Commercial Apartments	0	3	N/A	1	-66.7%
Farms**	46	20	-56.5%	22	10.0%
Woodland	11	15	36.4%	14	-6.67%
Miscellaneous***	126	131	4.0%	97	-26.68%

Conserved Land

There are conserved agricultural land and natural areas in Benson. For information on conserved land and trusts that conserve land, contact the Vermont Housing and Conservation Board. These trusts hold development rights of agricultural land, forest land and other land, and sometimes ownership of ecologically sensitive areas. The natural resources map indicates the land with restrictions, specifically conserved land and its ownership, State owned land and the Boy Scout camp in Benson.

The State's Current Use Program is used in Benson. In the 2012 Grand List, 44 of the 623 parcels, representing 8,813 acres of the approximately 29,000 acres in Benson, are enrolled in this program for a total of $5,436,00 (the total Grand List has a value of $107,000,00).

Future Direction of Benson Land Uses

The Planning Commission will periodically review and update the existing land use regulations and ordinances as appropriate to accomplish the goals of this Plan. It is hoped that this effort will protect water quality, limit the loss of agricultural land, protect natural areas, protect forests and forestry, and encourage development in a way that preserves the Town's rural character and natural beauty. For this reason, five land use districts have been established, with differing objectives in each. It is not the goal to prevent development, but to direct development such that the unique social, environmental and historical characteristics of Benson are preserved.

It is the goal of the Planning Commission that there will be expanded opportunities for employment in Benson. Entrepreneurship is encouraged along with home businesses and cottage industries. It is not intended to specifically exclude any types of development from any district except as detailed under the district description below or in the zoning and subdivision bylaw.

Land Use Districts

- **Agricultural and Rural Residential District (ARR District)**

  To preserve the community's rural character and to provide a mechanism for viable agricultural, residential and commercial uses with minimal adverse impact.

  ARR is intended to provide land area for low-density residential development, farming, forestry, recreation, commercial and other rural land uses. Any such growth should be consistent with the rural character of the area and site conditions. Conservation of a working landscape of open space and natural resources should be a high priority to maintain Benson's rural atmosphere. The Town encourages traditional and diversified agricultural uses and activities in this district and supports the right to farm for family farms. The Town should promote activities that preserve scenic and agricultural lands. The goal of this district is an attractive functional countryside.

- **Village District**

  To provide for mixed residential, commercial and public uses in the area generally served by the municipal waste treatment facility.

  The purpose of the Village District is to allow residential housing and commercial enterprises of a scale that will blend well with existing residences and complement the "village" atmosphere preferred by Benson's residents. All development in this district is to have adequate parking, suitable landscaping, screening, lighting, and signage and be designed to minimize traffic impacts in order to protect the character of the neighborhood. Low traffic flow businesses are to be encouraged. It is important to preserve and promote the historic nature of the village district.

- **Lake Shore District**

  To conserve and protect those lands adjacent to the ten lakes and ponds as indicated on the Lake Shore District on the proposed land use map, excluding Lake Champlain.

  The purpose of this district is to protect water quality, public access, and natural ecosystems. The land in this district is within 500 feet of the mean water level of lakes in the sections indicated on the land use map. The purpose of this district is to protect water quality, while balancing the desire for development with the need for protecting public access, the shoreline and wildlife habitat. The names of the lakes and ponds in this district are: Lake Sunrise, Sunset Lake, Perch Pond, Doughty Pond, Parsons Mill Pond, Glen Lake, Mud Pond, Bullhead Pond, Beaver Meadow, and Root Pond (including the two unnamed lakes nearby).

- **Lake Champlain Shoreline District**

  This district should promote similar goals as the Lake Shore District except it must recognize the special circumstances and opportunities presented by Lake Champlain.

•**Flood Hazard Area Overlay District**

To promote the public health, safety and general welfare, to prevent increases in flooding caused by the uncontrolled development of lands in areas of special flood hazard, and to minimize losses due to flooding. Benson has existing regulations that regulate flood hazard areas.

Land Use and Growth Goals, Policies and Programs

- Encourage compact development in the Village district.
- Encourage improved professional, educational and medical services in Benson.
- Encourage traditional and diversified agricultural and forestry land uses.
- Encourage commercial, residential and industrial developments that are consistent with Benson's rural and village character.
- Encourage the efficient use of the Town's wastewater treatment facility by encouraging such things as more compact development in the village area than elsewhere in the Town, and water savings devices in homes and businesses.
- Discourage development that would create excessive traffic through the village, or overwhelm the municipal wastewater system and other services.
- Establish standards for developments along Town streams, rivers, ponds, and lakes.
- Encourage development that is integrated into the rest of the community.

Through the administration of this Plan, the Town desires to continue orderly growth and development which protects community resources and provides for the appropriate use of all lands while preserving open spaces, forest, conservation areas and agricultural lands within the Town. In short, this Plan recommends that Benson take steps to preserve its rural character and permit such growth and development as would benefit the general good of the Town.

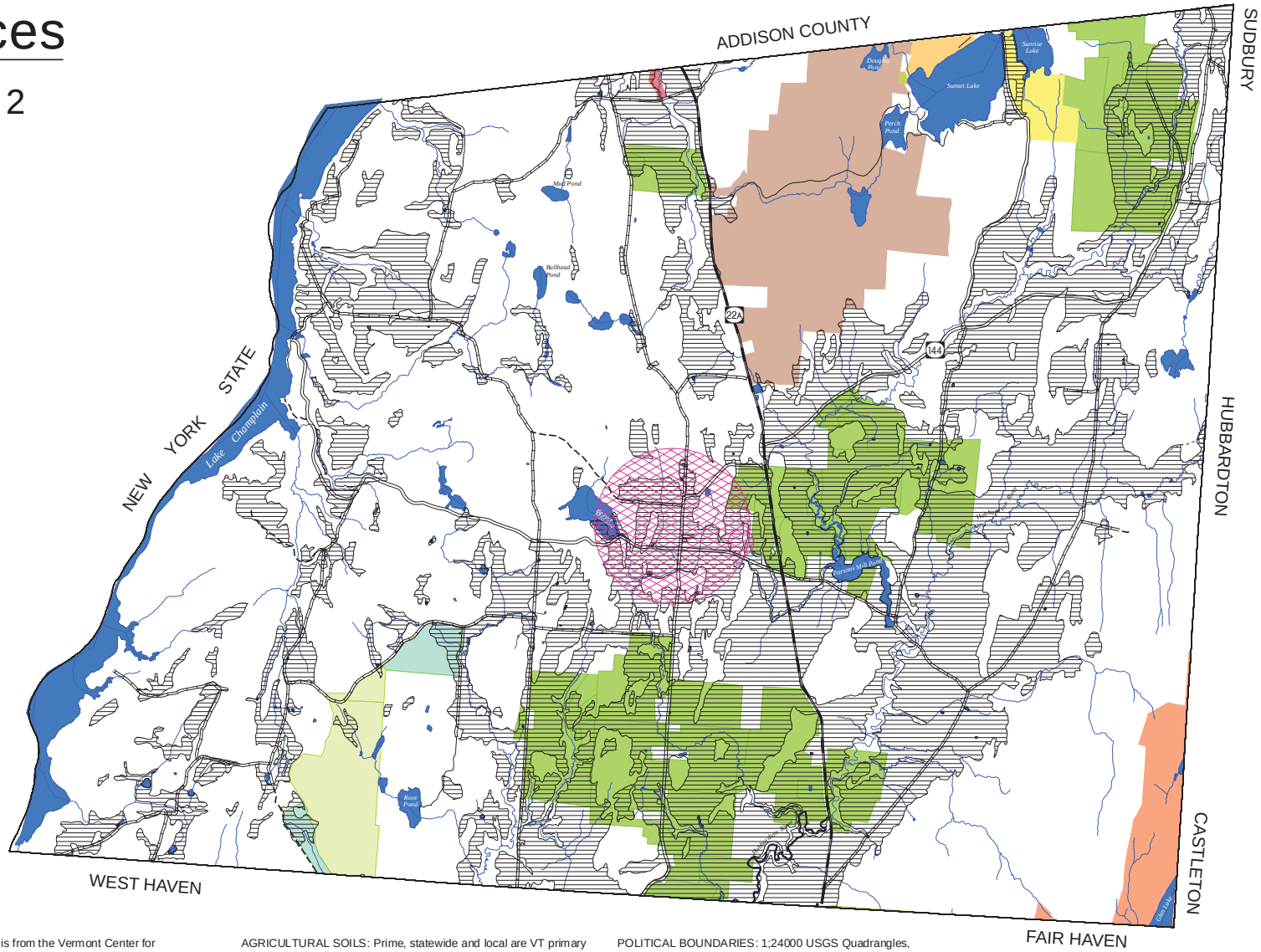
MUNICIPAL AND REGIONAL COORDINATION

The Planning Commission has attempted to coordinate the elements contained within this Plan with the plans of surrounding Towns and with the Rutland Regional Plan. Benson has goals similar to those neighboring Towns for the continuance of a working landscape in the Lake Champlain basin.

The Towns most impacted by development in Benson are the Towns of West Haven and Orwell. These Towns have landscapes similar to Benson and lengthy borders of rural developed property with the Town of Benson. There is minimal interaction with the Towns of Fair Haven, Castleton, Hubbardton and Sudbury. The Sudbury-Benson border length is minimal and the borders with the other three Towns are forested areas. We do coordinate and cooperate with the surrounding Towns. The Route 22A Corridor Study was a cooperative effort of the Towns of Orwell, Benson, West Haven and Fair Haven. Orwell and Benson share road equipment and assist each other with

Natural Resources

Benson Map 2 of 2



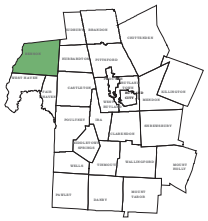
Legend

- Streams & Rivers
- Lakes & Ponds
- Prime and Statewide Agricultural Soils
- Well Head Protection Areas

Public and Conserved Lands

- CAMP SUNRISE - BOY SCOUT CAMP
- SUNSET LAKE- BOY SCOUT CAMP
- THE NATURE CONSERVANCY
- THE NATURE CONSERVANCY EASEMENT
- VERMONT LAND TRUST EASEMENT
- BOMOSEEN STATE PARK
- EAST CREEK WILDLIFE MANAGEMENT AREA
- POND WOODS WILDLIFE MANAGEMENT AREA
- SUNSET LAKE ACCESS AREA

Location Map



Map intended for planning purposes only.
For more information, please contact::
Rutland Regional Planning Commission
PO Box 965, The Opera House, Third Floor
Rutland, VT 05702 (802)775-087

SURFACE WATER: Data is from the Vermont Center for Geographic Information, Inc, Vermont Hydrography Data set. The VHD data is a subset of the National Hydrography Data set.

ROADS: VT Center for Geographic Information

WELLHEAD PROTECTION AREAS: SPA's for groundwater sources (wells, springs), 1:24,000 USGS QUADRANGLES, VANR- DEC-Water Supply Division and VT Department of Health, 1998.

AGRICULTURAL SOILS: Prime, statewide and local are VT primary agricultural soils for Town and Act 250 planning. Natural Resources Conservation Service. Soil data are accurate to a resolution of three acres, unmapped "inclusions" up to three acres may exist in some areas. This information is generalized. It should not be used for the evaluation of individual sites. Soils shown are based on national USDA-NRCS criteria and have good potential for sand and gravel deposits.

PRIVATE LANDS: VCGI

POLITICAL BOUNDARIES: 1;24000 USGS Quadrangles, VCGI, 1991.

PUBLIC LANDS: VCGIPRIVATE CONSERVED LANDS - land in full or partial ownership by 501(c)3 conservation organizations (VLT, TNC, GMC, and others)

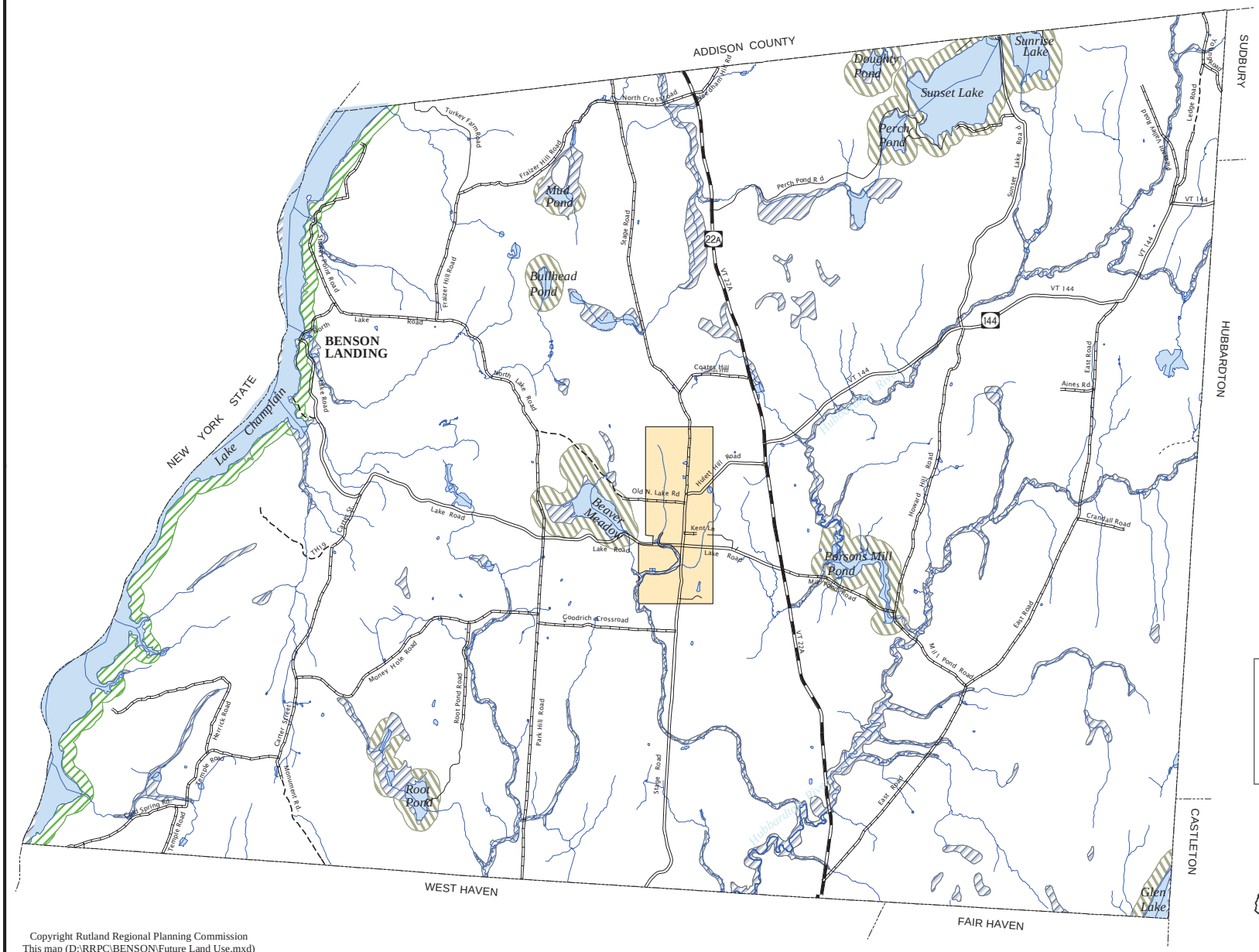
Miles

0.85 0.425 0 0.85 1.7

This map (D:\RRPC\BENSON\Benson Natres2.mxd) was produced 3/4/08 updated 1/30/09

Benson, VT

Future Land Use



Legend

- State Highway
- Class 2 Town Road
- Class 3 Town Road
- Class 4 Town Road
- Other Road
- Private Road
- Surface Water
- Lakes & Ponds

DISTRICT

- Agricultural Rural Residential
- Flood Hazard Overlay District
- Lake Champlain Lake Shore
- Lake Shore
- Village

Miles

0 0.25 0.5 1 1.5 2

RUTLAND REGIONAL PLANNING COMMISSION

This map (D:\RRPC\BENSON\Future Land Use.mxd) was produced on 1/5/2004

Town of West Haven
Town Plan

2009

3.0 Overall Goals and Objectives

3.1 Introduction

The Goals and Objectives of this Plan establish the overall direction for public and private actions that affect land use in the Town of West Haven. They are intended to guide the future growth and development of land and public services and facilities. They are also intended to guide the protection of the environment and the preservation of rare and irreplaceable natural areas, scenic and historic features, and special resources. Insofar as they address energy, they are the Town's statement of policy on the conservation of energy.

3.2 Overall Goals

It is the goal of the Town of West Haven to:

Land Use Goals

Maintain the historic settlement pattern of more densely settled villages and neighborhoods surrounded by working farm and forest land.

Protect and encourage the maintenance of agricultural lands for the production of food and other agricultural products. Conserve all working farmlands, particularly in the three primary farmland sections of town.

Encourage the types, locations and intensities of land use that are compatible with the long-term environmental and economic capability of the community.

Economic Goals

Nurture a strong and diverse economy that provides satisfying and rewarding job opportunities for residents and maintains high environmental and community standards.

Strengthen and protect the town's agricultural economy, including farming, forestry, and related activities.

Transportation Goals

Create a transportation system that promotes the other goals and policies of this plan and makes it easier - not harder - to direct efficient land use patterns and economic development.

Provide and maintain a transportation system that is safe and efficient.

Provide and maintain a transportation system that meets the needs of all segments of West Haven's population

Provide a level of public benefits from each component of the transportation system sufficient to outweigh the social, environmental, economic and energy costs.

Minimize transportation energy consumption and trips.

Water Quality

Improve or maintain water quality.

Establish public access, including visual access, to water and shoreline.

Maintain high quality groundwater and sufficient yields to adequately serve current and future residents of West Haven.

Wetlands Goals

Retain the present amount (no net loss) of significant (Class One and Class Two) wetlands and the values and functions that they serve.

Protect and enhance the ability of wetlands to provide values and functions of significance to the nation and state or of importance to the town.

Wildlife Habitat and Natural Areas Goals

Maintain and improve wildlife habitat and natural areas in the town and region to the fullest extent possible.

Cultural and Historic Resources Goals

Protect and preserve significant historic structures, sites, or districts; known prehistoric archeological sites; and areas where prehistoric sites are likely to be found.

Preserve the historic traditions and values that give West Haven its rural character and make it a special place to live.

Energy Goals

Conserve renewable and nonrenewable energy resources.

Reduce reliance on nonrenewable energy sources such as oil and gas, and increase use of renewable energy sources such as wood, methane, solar and wind.

Public Facilities, Utilities, and Services Goals

Provide educational opportunities that enable every child to become a competent, self-assured, caring, productive, responsible individual and citizen who is committed to continued learning throughout life and prepared for a world of rapid change and unforeseen demands.

Maintain a safe, secure learning environment where quality educational opportunities are provided to all students.

Provide an environmentally sound, and energy and cost efficient system of public facilities and services to meet present and future demands for fire protection, public safety, emergency medical services, water supply, sewage treatment, solid waste management and disposal, and other essential needs.

Provide the desired levels of public facilities and services, including Wireless and land-based telecommunications infrastructure to meet the needs of residents and businesses.

Encourage maximum flexibility for parents to have access to quality child care providers.

Recreation Goals

Maintain and enhance outdoor recreational opportunities and public access to them.

Establish and maintain a community based system of trails and greenways linking village centers, concentrated residential settlements, centers of employment and commerce, public places (eg. schools, parks, churches), and important recreation sites (eg. lakes, ponds, streams, vistas, woodland areas).

Protect and enhance the natural beauty and scenic characteristics of significance to local landscapes, including focal points and characteristics such as:

- landscape diversity,
- order and harmony of landscape elements,
- unique combinations of natural +/- or cultural features,
- distinctive distant views,
- foregrounds in harmony with distinctive distant views,
- skylines,

shorelines,
steep slopes,
agricultural and forest land,
traditional villages and streetscapes,
historic buildings and cultural features,
significant scenic roads and pathways.

Housing Goals

Provide housing that meets the needs of a diversity of social and income groups, particularly households of low and moderate income.

Provide safe, sanitary housing that is conveniently located to public facilities and services, and employment and commercial centers.

3.3 Overall Objectives

It is the objective of the Town of West Haven to:

Land Use Objectives

Work actively with landowners and land developers to achieve the goals, policies and objectives of this plan.

Approve subdivisions or developments only if they are consistent with the broad goals of the plan.

Conserve undeveloped lands surrounding existing built-up areas.

Discourage strip development along roads.

Base development densities for different areas of town on existing and desired settlement patterns, distance to and availability of town services, physical capability of the land for development, the presence of important natural resources, the size of parcels, the need for affordable housing, and consistency with goals and policies of the town plan.

Conserve the town's primary agricultural soils for agricultural uses.

Economic Objectives

Cooperate with other towns to maintain a balance between jobs created and natural growth in the region's workforce.

Participate in Act 250 reviews of business proposals that could accelerate development pressures in West Haven.

Support the creation of job opportunities that enable employees to use fully and develop their skills and abilities.

Support development of local businesses that create markets for locally produced goods and services or which themselves create value added products from locally produced goods.

Encourage manufacturing and marketing of value added agricultural and forest products.

Encourage use of locally grown agricultural and forest products.

Transportation Objectives

Manage roads to meet community level demand and maintain a rural character.

Analyze and compare a reasonable range of alternatives before supporting any new transportation projects, policies or improvements.

Examine alternatives in terms of environmental costs, energy use or

6.9 Energy

The majority (53%) of West Haven households used fuel oil for home heating in 2000, according to the US Census Bureau. Bottled or tank gas and wood were the other primary sources, accounting for 26% and 19% respectively. Household electricity is provided by Central Vermont Public Service. Energy facilities in the town include a hydroelectric dam at Carver's Falls and a transmission line strung parallel to Route 22A.

The Town of West Haven is committed to encouraging energy efficiency and the use of renewable energy resources throughout the community. The Town recognizes the link between promoting a reduction in resources and efficient patterns of land use development.

6.10 Communications

Communications exist in several forms in West Haven. Traditional land-based telephone access is provided by Verizon through a network of strung lines. Dial-up Internet access is available from a variety of providers. Wireless telecommunication is possible in select areas throughout the community based on reception, though no towers or repeaters are currently located in the town.

Obtaining high-speed Internet access and improved wireless communications are priorities for the Town of West Haven. In that light, the town has recently adopted regulations to encourage wireless telecommunications facilities to be constructed in a manner that is unobtrusive and consistent with the goals of this plan.

6.11 Recreation

Recreation is important to Vermont and Vermonters. Recreational opportunities available to the residents of the Town are found inside and outside of West Haven. Developed recreation opportunities are available at the Steven Pettis Memorial Recreation Field next to the old elementary school, while undeveloped facilities include Bald Mountain and the Poultney River corridor. Managed by a volunteer Recreation Committee, this field has places to play baseball, soccer, and basketball.

West Haven's location and geography provide the town with unique opportunities to promote outdoor recreation. Preserves maintained by The Nature Conservancy couple with the Poultney River and the southern end of Lake Champlain to provide varied undeveloped areas for hiking, cycling, cross-country skiing, and other activities.

Designing and implementing a plan to promote year-round recreation in West Haven is a priority.

Specific recommendations for the Agricultural District include the following:

- subdivisions should be designed to preserve "Farmable" lots;
- roads should be maintained to permit easy transportation of agricultural commodities,
- natural areas should be avoided by development
- water supplies should be protected through careful design and siting of septic facilities and through the use of best management practices.

Development in the Agricultural District should, to the greatest extent possible, maintain the low-intensity, active use character of the land. The Town encourages the continued development of agricultural and forestry enterprises in this district. While residential development is encouraged to take place in the Settlement District, very low intensity construction can take place in a manner that is consistent with this Plan.

10.4 Conservation District

The Conservation District contains West Haven's most important habitat and natural resource lands.

The District, which takes up approximately 40% of the town, is predominately characterized by tall hills, steep slopes, wetlands, and stream corridors

Specific natural features in the district include Bald Mountain, East Bay and its associated marshes, numerous deeryards, and several significant wildlife habitats and communities. These areas are home to exceptional natural habitats.

Future Development

There has been little development in the Conservation district in recent years. Much of the land, including most of the lower peninsula, has been placed under permanent conservation easements.

Lands included in the district are generally unsuitable for development because of the poor soils, steep slopes, poor access, and the presence of many natural habitats of importance to the town.

Furthermore, access to much of the district is extremely limited.

Specific recommendations for the district include the following:

- all forms of development should be directed to other areas of the town whenever possible;
- development that does take place in the conservation district must avoid important natural areas;
- public access to important resource areas should be retained as much as possible.

Development in the Conservation District should be limited to very low impact uses. The Town, as well as The Nature Conservancy and other major stewards within the district, are committed to preserving and making public use of the unique natural environments in an unobtrusive manner. Year-round residences should be prohibited; development density of allowed uses should occur at 25 acres per lot.

10.5 Land Use Implementation Strategies

The following strategies suggest ways that West Haven's land use goals and objectives should be implemented. The Town should:

Develop a program to ensure that agriculture remains a viable land use.

Stabilize property taxes for farmers and forest land owners enrolled in the Vermont Use Value Appraisal programs.

Create and implement zoning, subdivision and other bylaws that promote the land use and other goals of this plan.

Develop provisions in both the zoning and subdivision regulations that provide for greater flexibility and creativity in site planning.

Establish a Land Conservation Fund for the purpose of acquiring easements and/or title to significant agricultural, historic, or natural lands in West Haven. Money for the Fund may be provided by voluntary contributions, or by town appropriations, as decided by the town voters.

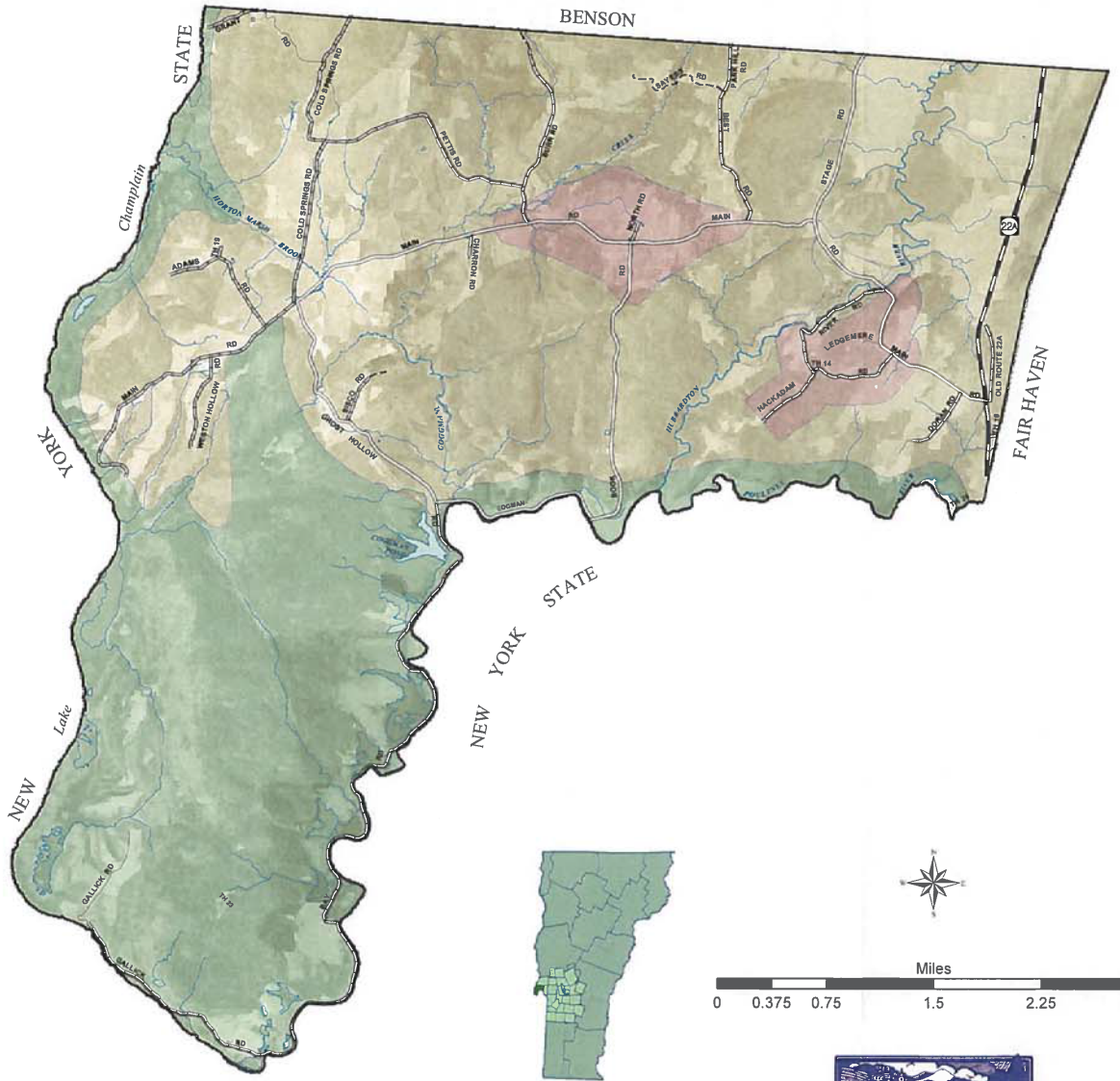
Create property tax incentives to conserve farmlands, river access points, critical trails, scenic areas, and key historic areas. If possible, couple incentives with right-of-first refusal held by the town.

Assemble a booklet and supplemental information on how to site and design development that promote the goals of the town and the landowner. Include a listing of voluntary conservation measures and resource people.

Map 4

WEST HAVEN, VERMONT

CONCEPTUAL FUTURE LAND USE MAP



LEGEND

- State Highway
- Class 2 Town Road
- Class 3 Town Road
- Rivers and Streams
- Lakes and Ponds
- Conservation District
- Settlement District
- Agriculture District

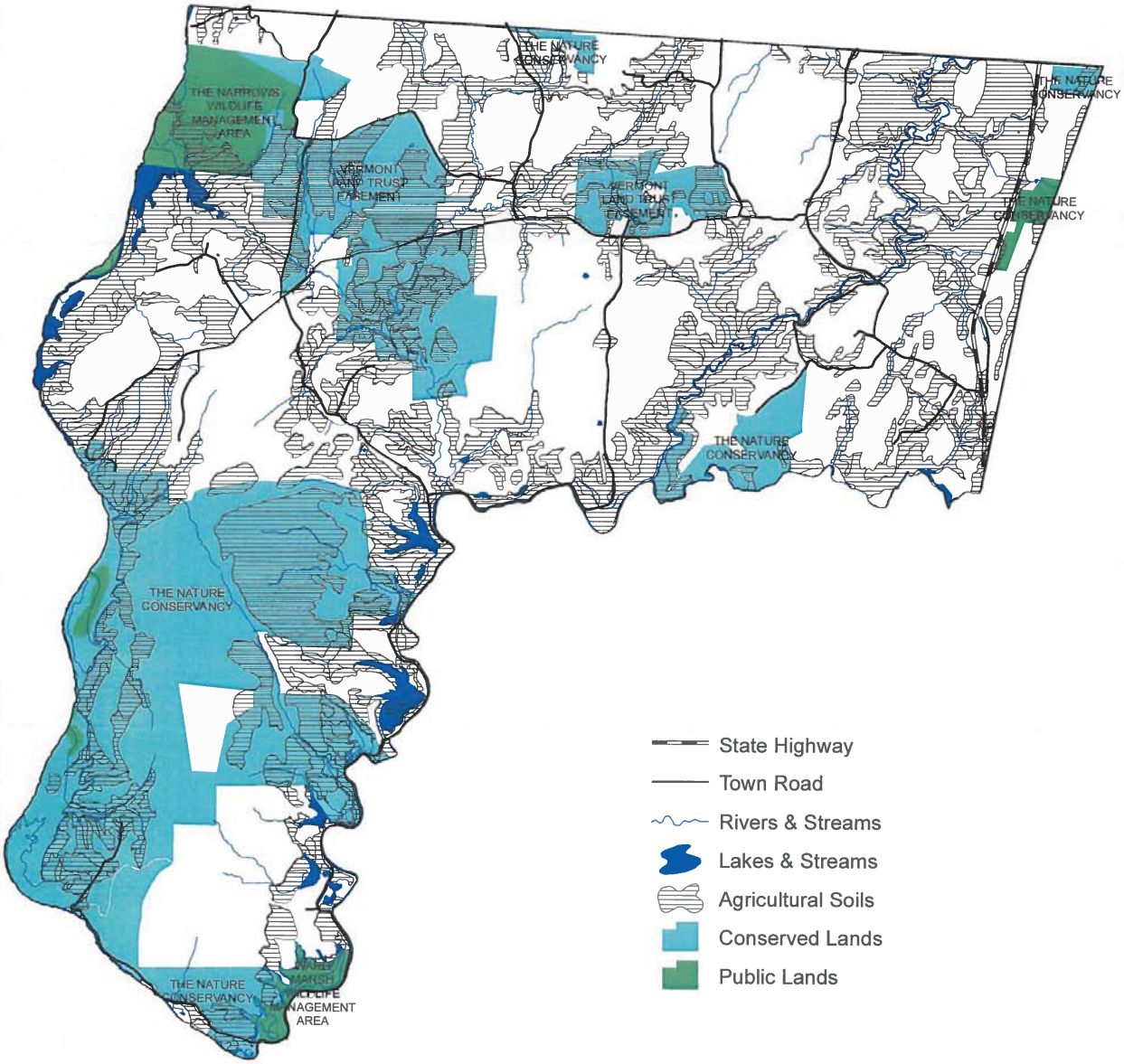
SOURCES

Vermont Center for Geographic Information,
West Haven Planning commission, 2003.
Vermont Mapping Program Orthophotos 2006.

Natural Resources

West Haven

Map 2 of 2



Location Map

Map intended for planning purposes only.
For more information, please contact:
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PO Box 965, The Opera House, Third Floor
Rutland, VT. 05702
www.rutlandrpc.org

POLITICAL BOUNDARIES: 1;24000 USGS Quadrangles, VCGI, 1991.

ROADS I: VT Center for Geographic Information.

SURFACE WATER: Data is from the Vermont Center for Geographic Information, Inc, Vermont Hydrography Data set. The VHD data is a subset of the National Hydrography Data set.

PUBLIC/CONSERVED LANDS: Vermont Conserved Lands Database 1:5000 parcel data,UVM-SNR-SAL, 1999.

AGRICULTURAL SOILS: Prime, statewide and local are VT primary agricultural soils for Town and Act 250 planning.

Miles

0 0.375 0.75 1.5 2.25 3

Town of Fair Haven

Town Plan

Adopted September 24, 2003 – Re-adopted 2008

High quality schools are essential to the well being of Fair Haven's citizens. Fair Haven shall provide opportunities for a quality education to each of its citizens. Quality educational facilities are cornerstones for a healthy community and should be supported by all citizens including those without school-aged children.

LAND USE

Fair Haven is a friendly typical small town with some remarkable assets, not the least of which is the "town green". A spacious park in the center of our village, one of the few remaining "wheel" or "spoked" parks, was donated to the town shortly after the Revolutionary War by Matthew Lyon, the most famous and prosperous of Fair Haven's early settlers.

Fair Haven has balanced the needs of its residents by encouraging a variety of activities which include commercial, industrial, residential, agriculture and recreational uses. We begin the twenty-first century with the intent and hope to preserve that same balance. Our moto might be "Prosperity with Pride".

The purpose of the Land Use Section is to document present land uses and establish a guide to future land use for residential, agricultural, commercial, industrial, recreation, conservation, open-space or other public uses.

Inventory and Trends

Fair Haven is located approximately 20 miles west of Rutland City in the western corner of Rutland County and borders Washington County, New York. A major east-west transportation corridor including the divided limited access US Route 4 and the Central Vermont Railway bisect the town which serves as a major crossroads for federal and state highways.

While the east-west US Route 4 is the primary gateway for visitors to Vermont from the New York State Thruway, the north-south Vermont Route 22A has become a major highway carrying goods and visitors not only to Vergennes, and Burlington but is also used as a connector to Canada. Fair Haven is slightly more than 11,000 acres (17.2 square miles) in size. The residential and commercial "village" is about 900 acres or 8% of total area. The rural and open lands account for approximately 4,770 acres or 43% of total, with the remaining 49% consisting of forests, rocky hilly wetland, waterways, town watershed and lands of the State of Vermont.

Much of the remaining productive agricultural land is located in the flood-plain of our two most significant natural features, the Castleton and Poultney Rivers. A National Wetlands Inventory map, on file in the Town Clerks office shows many small patches of wetlands, some even in the residential portion of town.

Topographically, the town runs from a high point of 947 feet above sea level at the summit of "Coon's Den in the "North Woods" to a low of about 285 feet above sea level at the point the

the need for further infrastructure, the potential for municipal marketing and the demand for such parcels.

Resource Protection

The purpose of this area is to protect property and people from flooding associated with two major rivers, the Poultney and Castleton Rivers, and to protect and manage valuable natural resources and environmental processes.

This area consists of the 100-year flood plain and a buffer area adjacent to other significant surface waters including Inman Pond, Glen Lake, Mud Brook, Castleton River and Poultney River.

The natural use of a flood plain is to retain flood waters safely until such time as high water recedes back into its normal channel. This temporary water storage area also functions to protect life and lower water levels downstream. Flood plains also provide for riparian habitat that supports a variety of plant and animal life not found in upland habitats. Buffers maintain the integrity of stream channels and shorelines; reduce the impact of upland sources of pollution by trapping, filtering, and converting sediments, nutrients, and other chemicals; and supply food, cover, and thermal protection to fish and other wildlife.

The resource protection area will accommodate the natural uses and benefits of the flood plain and other riparian corridors while restricting development, filling, and other incompatible uses. Regulation of riparian buffers will apply to future development only. Certain resources, such as aquifers, ridge lines, steep slopes, natural areas, significant wildlife habitat, prime agricultural soils and overlay districts may protect wetlands.

Medium Density Rural

The Medium Density Rural Area accommodates moderate density residential development in areas accessible to village centers where municipal services are available. Development within this area should be carefully sited and clustered in a manner that will allow preservation of significant open space parcels including neighborhood recreational areas, smaller farms, and important natural amenities.

Low Density Rural

The Low Density Rural Area encompasses the majority of the land area of the Town and includes all areas not covered by the other land use areas. Uses in this area will include agriculture, forestry, recreation, and open space protection, as well as low density rural residential housing and home occupations that are compatible with the preservation of the rural character of the Town. New residential housing will be primarily single family, detached dwellings, and planned residential development (PRD) provisions will be considered for all subdivisions. PRDs will allow for a greater number of smaller, clustered lots in exchange for permanent protection of open space elsewhere on the site. Community wastewater disposal systems may be appropriate in order to achieve this goal.

CONCLUSIONS AND OBJECTIVES

Land use can be defined as the framework for integrating the uses and values mentioned in

runoff from hard surfaces such as roads and parking areas. In addition, groundwater resources may be
depleted where over-development increases impervious cover and decreases filtration.

Development of open land may reduce outdoor recreation alternatives.

It's becoming more expensive to purchase and maintain open land.

Fair Haven does not have a plan to protect its ridgelines from development.

Scenic views are extremely important to town residents, but they are increasingly threatened by factors ranging from increasing residential development pressures to the potential construction of wireless communications towers. The next generation of wireless communications maybe satellite and the need for sun-setting of existing tower sights is something that Fair Haven may need to consider.

Fair Haven contributes to air pollution through car emissions, wood and trash burning and other activities.

OBJECTIVES

Encourage the conservation of land for forestry, farming, natural resource functions, and recreation.

Promote a viable agricultural sector as a way to maintain open spaces and natural resources on private lands.

Educate residents as to the effect of human activities on Fair Haven's natural environment and human health.

Focus development in suitable areas and promote rates of development and methods that minimize impacts on Fair Haven's natural resources.

Research current and evolving strategies for the protection of natural resources. Maintain high air quality standards for current and future residential, commercial and industrial development.

Ensure that air quality standards are fairly and equitably applied to existing residential, commercial and industrial development, and not just to new residential, commercial and industrial development.

Wetlands and waterways should be protected against unreasonable incursions, in hopes that they may be enjoyed by future generations in much the same state.

The Town should keep apprised of the State's plans for lands and should request the right of first refusal if the State ever decides to sell land within the Town of Fair Haven.

Every effort should be made to preserve the Timber Rattler denning area, as the snakes have

never been known to do much damage, even though they are the source of much local legend.

Fair Haven should pursue all available avenues, both public and private, to preserve the Timber Rattle Snakes.

Relate development to potential pollution of off-site public and private water supplies. Investigate a mechanism and funding source for possible municipal acquisition of land either for public use or for species protection.

Encourage the use of the falls on the Castleton River for hydro power.

Residential, commercial, and industrial expansion should be compatible with the above long range goal that will enhance our quality of life, encourage local employment and improve our tax base.

IMPLEMENTATION

A Conservation Committee should be considered by the Planning Commission to help in determining the current and potential status of land use, identify threats to Fair Haven's natural resources, and develop plans for the preservation of these resources. This process must seek extensive public involvement in the creation of inventory maps to identify natural resources and potential sites of development and the development of an open space plan.

The Conservation Committee, Selectboard, Town Manager and Zoning Administrator will collaborate with local conservation and state agencies, and Fair Haven property owners on the promotion, enforcement and adherence to environmental regulations that protect water quality, wildlife and other natural resources and to conserve agricultural and natural areas. Efforts should be made to obtain funding and support for these purposes, including a Conservation Fund, if approved by voters, to provide seed money for conservation efforts.

The Fair Haven Economic Development Committee, Planning Commission and Conservation Committee should work with farmers, conservation groups, state agencies, legislators, and local businesses to develop marketing strategies and support sustainable agriculture, green industries and enterprises

The Planning Commission will design zoning and subdivision regulations in accordance with state and federal laws to protect croplands, water resources, scenic sites, wildlife habitat and other natural resources. The process of reviewing and modifying these regulations will include extensive public input. . The Recreation Path Committee and Conservation Committee will sponsor educational programs to foster appreciation of Fair Haven's natural resources.

The Selectboard shall support regional, state and national policies that promote the goals of the town plan.

The Planning Commission will develop specific regulations to require appropriate riparian buffers of natural vegetation to minimize the environmental impacts of future development. The Conservation Committee, Town Manager and Road Foreman will demonstrate best

A further cost saving might be released by the efficient use of the rail system that cuts through the center of Fair Haven. This could eliminate the reliance upon trucks that drive to the port of Albany or Newark to transport liquid fuel products to this area. An inter-modal transport sight that offered storage facilities for liquid fuels might be able to serve a large area. This would required further capital investment on the part of fuel distributors and rail transporters. The local consumer would not see any saving until the market had been penetrated to a point of saturation by the rail delivery system.

Transportation Energy

The oil embargoes of 1974 and 1980, and the price spike in 2000-02 gave U.S. citizens a clearer picture of the in-securities associated with reliance on this source. Yet we as a society, New England in particular, continue to rely on this energy supplied by foreign sources.

There is further reliance on transportation of liquid fuels to this area by motor transport from the Port of Albany and even Newark. This reliance could be alleviated thru rail transport of liquid fuels to a local inter-modal transport sight that would result in some saving in terms of the road miles traveled thereby reducing cost. These costs might not be seen by the consumer until such time as significant market share had been obtained by a rail shipping facility in term of distributorship and distributors.

Petroleum is the largest transportation energy source, and transportation is currently the largest demand of energy for most parts of the Region. Biking and walking provide energy-efficient means of transportation. Given good roads and safe conditions, biking can alleviate some of the traffic load. Given mixed land use and work facilities near shopping, walking can also eliminate some of the need for automobile travel, especially within the village. To this end the town's existing sidewalk network can be improved and expanded, pedestrian trails can be expanded, and a coordinated trail system is being examined to link sidewalks, trails and destination points.

CONCLUSIONS

Inefficient energy consumption is costly and threatens Fair Haven's environment. The failure to conserve energy results in excessive use of energy resources.

Scattered development encourages excessive use of energy.

The failure to use renewable energy resources, some of which are in abundant supply locally, results in excessive use of non-renewable resources and exports dollars that otherwise could support local energy suppliers.

Excessive reliance on the automobile for transportation is costly and threatens Fair Haven's ability to maintain a village center surrounded by a working rural countryside.

The continued development pattern that currently exists in Fair Haven will lead to development patterns that will continue to be energy efficient and conscious. Further growth in other areas of town in an unrestricted manner would not lead to the continuation of such patterns in terms of energy consumption.

Fair Haven has the transportation facilities that could facilitate state wide collection at an economical rate due to the economy of scale. The reprocessed regrind could be shipped world wide.

OBJECTIVES

Actively encourage efficient energy consumption.

Maximize energy conservation.

Utilize land use planning to influence development patterns and site design in an energy efficient manner.

Encourage the use of community renewable energy resources.

Actively consider energy efficiency in all future transportation planning.

Further development of the hydroelectric plant in Fair Haven is to be considered as a potential renewable energy profit center.

IMPLEMENTATION

Encourage the use of energy efficient techniques for new residential construction by having the zoning administrator provide all applicants with any available information on energy efficiency from the State.

Encourage the use of energy efficient space and water heating techniques through Planning Commission proposed revisions to Town bylaws and ordinances.

Promote development patterns that concentrate growth in central areas and locate residential growth near work and shopping areas through Planning Commission proposed revisions to Town codes and ordinances.

Encourage building with southern solar access to utilize passive solar heating, and to retain the opportunity for future solar development, through sighting recommendations by the Zoning Administrator.

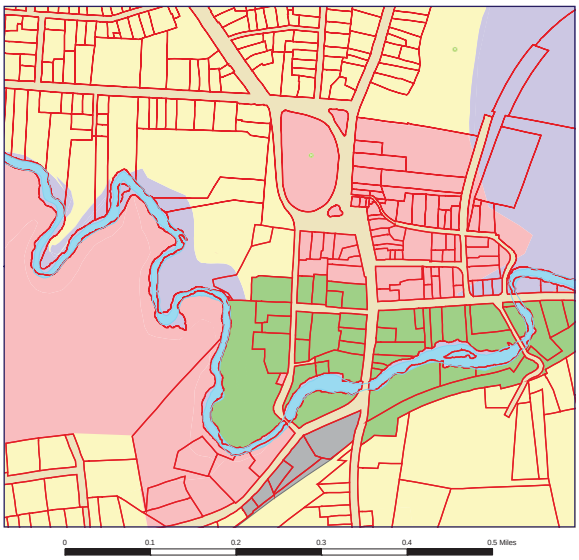
Encourage the use of shelterbelts (tree rows) to act as wind buffers in the winter, and for shading during the summer through sighting recommendations by the Zoning Administrator.

The Town should promote the use of locally produced wood as an energy source by maintaining a list of local wood suppliers.

The Town should support carpooling, vanpooling, and ride sharing by making available, through the Town Managers Office, brochures promoting these efforts.

Town of Fair Haven
Zoning Districts

Fair Haven Village Area



Legend

- Rural
- Industrial
- Watershed
- Lake Shore
- Residential
- Floodplains
- Mixed River
- Commercial
- Recreation Areas
- Rivers and Streams
- Lakes and Ponds
- Road Right-of-Way

0 0.5 1 2 3 4 5 Miles

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December 3, 2008
Updated December 15, 2009

RUTLAND REGIONAL PLANNING COMMISSION
e:\rpc\fairhavn\fhzoning04.mxd

Town of Castleton
2010 Castleton Town Plan

Effective August 23, 2010

ENERGY

The plan shall encourage energy efficiency, recycling, innovative house siting where applicable, and encourage renewable and alternate power and fuel sources within the Town of Castleton and in cooperation with other organizations.

Residential Heating

Heating and other related household activities account of 31% of all energy use in the State. Most home energy use in Castleton is provided by heating oil, propane, wood and electricity.

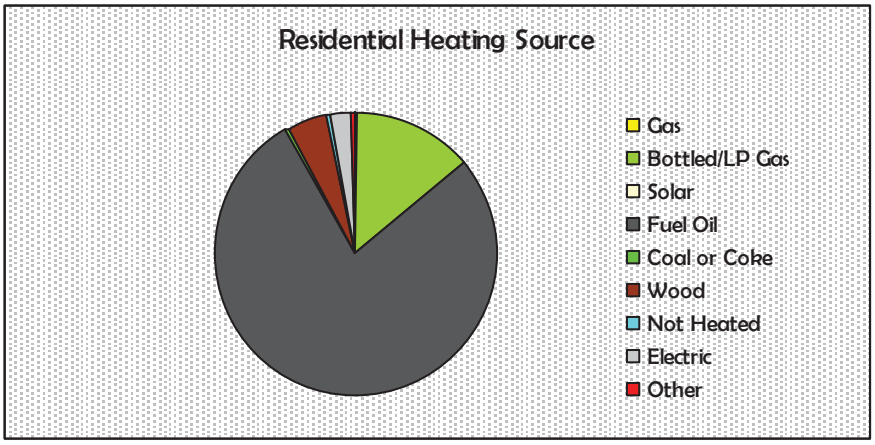


Figure 11:
Residential Heating Source

Source:
2000 US Census

Electricity

According to the Vermont Department of Public Service, nearly 40% of the energy consumed in Vermont comes from electricity. CVPS's power is purchased mainly through long term contracts with Vermont Yankee Nuclear Power Station (54.2% of its power) and with Hydro-Quebec (38.2%). While both of these energy sources are reliable and stable, there is some uncertainty about the long-term viability of these sources due to the approaching expiration of their contracts. The *Regional Plan* also predicts that energy use is likely to increase throughout the region at a slow pace, with high demand during the summer months. A small amount of power is also derived from wood (3.4%), oil (1.5%), CVPS Cow Power (0.1%), and other sources.

Central Vermont Public Service Corporation (CVPS) serves the electricity needs of the town through its district office in Poultney. There are two substations in the community, one in Castleton and the other in Hydeville. The town is served by a 12.5 KV distribution system, which has sufficient capacity for additional customers, both residential and commercial.

Transportation

Transportation is a significant source of energy use in the Rutland Region and Vermont as a whole. According to the Vermont Department of Public Service, transportation accounts for 31% of all energy consumed in 2000 in Vermont. Private automobile use is the primary source. 33% of Castleton residents work outside of the town. The average commute time is 22 minutes.

Alternative Energy Sources and Conservation Measures

Castleton supports incentives to encourage the exploration of alternative energy sources such as wind, water, micro-hydro, biomass and solar power, provided they fit with the natural environment and surroundings. The *Rutland Regional Plan* also notes the potential for local energy production in the form of methane captured from dairy farms or landfills, reestablishment of hydroelectric dams, solar generation, wind power, geothermal and biomass/biodiesel. These alternative energy sources are being installed in schools and farms, as well as in individual homes around the state and the region. Several homes in Castleton get all their domestic energy from solar and wind.

Although municipalities have little control over the fluctuations in the global energy market, there are many steps they can take at a local level to help their citizens and government offices function cost-effectively and with the smallest possible impact on the environment:

- **Efficient building design** - low-flow toilets and shower heads; energy efficient appliances and lighting; using local materials during construction; passive heating and cooling, through building orientation, proper fenestration and landscaping; solar hot water; super insulation and renewable heating sources such as geo-thermal heat pumps.

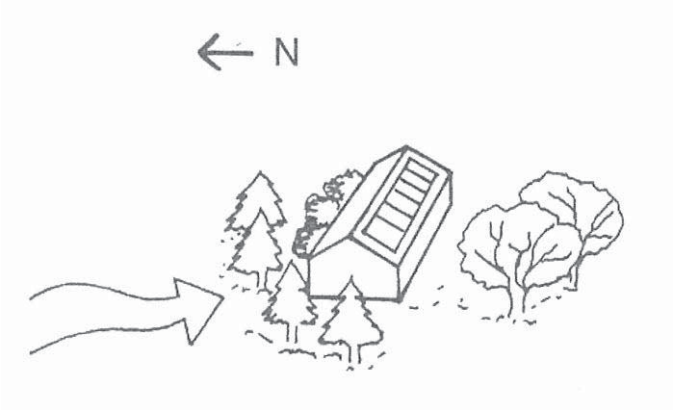


Illustration shows basic building orientation and landscaping that maximizes passive heating and cooling.

- **Development Patterns** - Land use patterns are a significant factor in determining energy demand and transportation is the leading source of energy use in the Region and State. Compact development and mixed use village/town center development helps reduce demand for transportation by locating many goods and services in the same place and facilitates pedestrian and bicycle modes of travel. Supporting compact development surrounded by more rural open areas also maintains the traditional land use pattern that residents and visitors associate with the history and character of the region.

ENERGY GOALS, POLICIES AND PROGRAMS

Goal

Reduce energy consumption where possible.

Policy 1

Improve energy efficiency of town operations as well as public, commercial and residential buildings.

Programs

- Encourage all new public and commercial construction to meet advanced energy standards.
- Encourage residents to take advantage of NeighborWorks of Western Vermont for energy efficient testing and loans for insulation, windows, etc.
- Encourage residents and businesses to utilize the resources of energy efficient programs such as "Efficiency Vermont" and CVPS's economic development incentives to help improve home and commercial energy efficiency.
- Conduct an energy audit of public buildings to evaluate potential energy savings and encourage local businesses to do the same.
- Encourage installation of outdoor lighting in accordance with the guidelines in the *Outdoor Lighting Manual for Vermont Municipalities.*
- Encourage the use of renewable sources of energy such as wind, solar, wood and methane.

Policy 2

Promote more energy efficient methods of land use and transportation.

Programs

- Encourage siting of buildings so as to reduce energy costs, such as solar orientation, use of natural windbreaks and shade trees, and development in previously existing growth centers.
- Allow flexibility in the siting of solar energy systems in the Castleton zoning regulations.
- Encourage the use of carpools, vanpools, and public transit for commuters and others.

Policy 3

Educate and encourage citizen participation in statewide and local energy conservation programs.

Programs

- Form a Castleton Energy Committee.
- Use Town Meeting Day to increase energy awareness.
- Promote energy conservation programs such as Button-Up VT, Way-To-Go commuter challenge and Vermont Community Energy Mobilization Project.

NATURAL RESOURCES

The natural environment has played an important role in shaping Castleton's image, appearance and attractiveness to town residents, seasonal homeowners, and tourists alike. Lake Bomoseen is one of the most actively used water bodies in Vermont and clearly of great importance to Castleton's

NATURAL RESOURCES GOALS, POLICIES, AND PROGRAMS

Agriculture and Forestry

Goal
Protect Castleton's farm and forest resources for future generations to enjoy.

Rationale
Clean air and water, as well as intact forests and working farms are essential to the health and quality of life of all living things that inhabit a community. Castleton is blessed with abundant natural amenities that remain largely unscathed by the polluting forces of the industrial world. 79.6 percent of respondents to the 2001 Castleton Community Survey stated that they believed Castleton should explore all measures available to protect farmland, open space, and forested areas within the town. This figure indicates that protection of natural resources is important to Castleton residents and vital to the continued welfare of the town.

Policy 1
Maintain and improve the quality of important soils, such as agriculture and forestry soils, when considering the future development of the town.

Programs
- ❖ Discourage development in areas of important agricultural and forest soils.
- ❖ Preserve farm and forest lands and maintain the working landscape through conservation, agricultural easements, and land acquisition.
- ❖ Encourage landowners to collaborate with the Cooperative Extension Service in the use of Best Management Practices to assist them in learning more about how to employ these practices for soil quality protection.
- ❖ Promote the use of acceptable soil erosion control measures in development of slopes in excess of 8%.

Water Resources

Goal
Protect and retain the quality of Castleton's surface water, groundwater and wetlands resources and enhance opportunities for access, recreation, education and natural beauty in these areas.

Policy 1
Prohibit any development that will degrade water quality in Castleton.

Programs
- ❖ Establish and enforce setback and vegetative buffer requirements in Castleton zoning regulations for development along lakes, rivers, streams and wetlands.
- ❖ Enforce all provisions of Castleton's shoreland zoning requirements.
- ❖ Reduce erosion and siltation of shorelines and stream banks by requiring proper stabilizing measures for new construction under Castleton's site plan review.
- ❖ Require on site storm water management measures be implemented on all new construction

- ❖ Inventory culvert systems in the area of the town wells.

Policy 6

Ensure adequacy of groundwater supplies.

Programs

- ❖ Enact regulations in accordance with the recommendations of the fire districts and public comment.
- ❖ Encourage the development of guidelines to determine the capacity of town wells.

Policy 7

Control water distribution costs.

Programs

- ❖ Conduct a feasibility study to evaluate consolidating all existing fire districts into a single entity.

Flood Hazard Areas

Goal
Control development within areas subject to periodic flooding

Policy 1
Continue to review development in Flood Hazard Areas for compliance to the Castleton Flood Hazard Area Regulations.

Fragile, Unique Habitats and Open Space and Scenic Resources

Goal
Protect fragile, unique habitats and open space and scenic resources from the adverse affects and encroachments of development.

Policy 1
Ensure that all proposed developments that might affect these resources are referred to the appropriate state agency for comment and thorough visual assessments are provided prior to construction.

Programs

- ❖ Require applicants proposing projects that may have broad visual impact on Castleton residents (e.g. telecommunications and radio towers, wind turbines, etc.) to provide detailed view-shed analysis prior to construction.

Policy 2
Support education of the public as to the importance and sensitivity of these resources and measures

that can be taken to reduce human impact upon them.

Policy 3
Support the conservation of large tracks of forest areas and open space so as to maintain critical wildlife habitat, ample corridors to accommodate seasonal migration patterns, and a scenic balance between the built and natural landscape.

Air Quality

Policy 1
Improve public awareness of air quality issues and steps that can be taken to reduce pollutants.

Programs
- ❖ Encourage the use of public transit and ride share programs.
- ❖ Strictly enforce prohibitions against the burning of trash.
- ❖ Promote awareness of alternative, less polluting, wood-burning technologies.
- ❖ Protect forest resources and review proposed development for impact upon air quality.

Town of Ira

Town Plan

Adopted December 7, 2009

Goal 3
Identify and protect all wetlands which provide significant functions and values in such a manner as to achieve no net loss of such wetlands and their functions.

Objective
Significant wetlands and other critical natural communities should be protected from development by encouraging the maintenance of an undisturbed buffer strip of naturally vegetated upland at least 50 feet in width around the edge and by preventing runoff and direct discharge into wetlands.

Objective
Encourage areas with rare, threatened, and endangered species to be protected to the greatest extent possible.

Objective
Encourage landowners to develop their property in a manner that retains the greatest possible amount of prime agricultural land for traditional uses.

Objective
Maintain agriculture and forestry as viable industries in Ira.

UTILITIES AND ENERGY

Water Supply

There are three methods or systems by which residents in the Town of Ira obtain potable water. The source most commonly found is the surface or groundwater well. These wells are penetrated to the water table by drill or other mechanical means and are then incased in metal or concrete for containment. This type of water system is less expensive than an artesian well, but can prove unreliable at times. In dry seasons, when the local water table lowers, these wells fail to provide water in sufficient quantity for normal residential uses. In wetter seasons, these wells can be subject to contamination from foreign matter introduced to the well through runoff.

Artesian wells are deep wells, drilled into the subterranean aquifer and are the most reliable, and often the most preferred, sources of water. In Ira, the artesian well is second to the surface well in popularity of use. This type of system is the most expensive to construct and in Ira is more so, because of a greater average depth to the aquifer than in neighboring communities. Artesian wells in the southern half of Ira range in depth from under 100 feet to over 1,000 feet. There have been attempts on certain properties, mostly in the southern half of Town, to obtain useable delivery rates of water through artesian wells, without success.

When accessible and of good quality, ground springs are used by Town residents as the third water system of choice. Springs generally are regarded as a high quality water source, in many cases are, but they can be subject to the same problems as are experienced with surface wells.

All or nearly all residences in Ira are supplied with water by use of electric pumps. Generally, a submersible pump is used when the source is an artesian well or surface well, and self-priming above-ground pumping systems are used with surface wells and ground springs. Some older homes with surface water wells or ground springs use gravity flow to transport the water, and to provide a head of pressure, which would otherwise be generated by an electric pump.

Ira has limited watershed. In contrast to some neighboring communities, there are no lakes, and there are very few ponds or other bodies of standing water such as marshes or bogs. Ira Brook, which flows north through the southern half of Town, and the Castleton River located in North Ira, are the two rivers in Town and account for the majority of wetlands indicated on the Town's land use map. The Town of West Rutland has a municipal forest of several hundred acres located in a remote area off Clark Hill Road, which tract serves as the primary watershed for that community's municipal water system. The topography in Ira is such that the mountainous and mostly wooded areas in the outlying areas of Town serve to channel precipitation, in the form of runoff, to the lower lying and settled regions in Town which are dependant upon such water for residential uses.

Sewage Disposal

The Town adopted an on-site sewage ordinance that was substantially revised on June 14, 1990, incorporating State standards for acceptable on-site septic disposal. Because of recent changes to the Environmental Protection Rules for Wastewater System and Potable Water Supply Rules (adopted by the State, Agency of Natural Resources, Department of Environmental Conservation) construction of new disposal systems and repairs or changes to existing ones will require a State permit, so the Town no longer needs to regulate wastewater systems.

Solid Waste Disposal

The Town is a member of the Rutland County Solid Waste District, which is the primary regional entity administering and addressing solid waste disposal problems on a regional level on behalf of its constituent municipalities. The District operates a transfer station located on Gleason Road in Rutland, which is available to Ira residents who pay an annual fee for use of the facility. The facility currently accepts household wastes, including glass, paper and metal. Continued use of the existing center and any other centers as may become available in the future, should be encouraged.

Based upon the Town's sparse settlement patterns and population, it is anticipated that the future needs for disposal of solid waste will be met through continuation of the existing voluntary recycling and private contract haulage methods.

Electric Service

The Town of Ira is located entirely within the service territory of Central Vermont Public Service Corporation (CVPS), which provides electric service to all currently settled areas in the Town. Along the U.S. Route 4A corridor in North Ira, there are two high-tension transmission lines which serve to carry electricity through the Town for eventual use or distribution at destinations outside Ira. One line is a 46 kv line owned and maintained by CVPS, and the other is a 115 kv line owned and maintained by Vermont Electric Power Company. A third transmission line is owned and maintained by Vermont Marble Power Division of OMYA, Inc. in the northeast

section of Ira. Like the transmission lines located in North Ira, this 46 kv line does not serve local needs in Ira.

The extension of existing distribution lines to new locations in Town is addressed on a case-by-case basis by CVPS, and the costs of line extensions as may be required are borne by the new customer or customers in accordance with the company's applicable tariffs. The existing distribution lines are located either within Town highway rights of way, or on private property with land owner permission and/or easements. The responsibility for maintenance of transmission and distribution lines rests with the utility, and not with the Town.

With respect to line extensions and any new distribution lines, decision making on location, construction and maintenance will likely remain with the involved land owner(s) and the utility.

Energy Efficiency Programs

In the interest of limiting the overall demand for electricity and lowering individual bills, CVPS and other utilities in Vermont have created energy efficiency programs. The largest statewide initiative operates as Efficiency Vermont.

Efficiency Vermont is the State's energy efficiency utility—the first of its kind in the United States. Efficiency Vermont represents an innovative approach to helping Vermonters save energy and protect the environment.

The Vermont Public Service Board (Board) ordered the creation of the energy efficiency program in response to a request from the Department of Public Service (the Department is the state's Public Advocate), all of the state's twenty-two electric utilities, and a dozen consumer and environmental groups. Through Efficiency Vermont, Vermont consumers, businesses, manufacturers, and farmers across the State can participate in the same seven energy- and money-saving programs.

Efficiency Vermont offers money-saving programs to homebuilders and buyers, low-income Vermonters, farmers, and residential, commercial and industrial customers. The programs help consumers capture energy-saving opportunities available through the installation and use of efficient construction designs, products and equipment. For example, low-income Vermonters can receive assistance to convert from costly electric heat and hot-water systems to lower cost alternatives. Electric consumers can receive instant coupons or mail-in rebates for discounts on energy efficient lighting products and appliances.

Renewable Energy

Renewable energy as an alternative to energy generation with fossil fuel can provide for electricity needs while protecting the environment.

Solar energy is an important renewable energy resource. The solar resource available to much of Vermont may not be enough to provide the total energy needs of a household, but can contribute significantly as a substitute to electric heat and hot water. Solar energy can be harvested through solar panels in the form of electric current, to power appliances, or as a passive energy used to heat a home. Passive solar design uses the sun's energy in heating a structure, so that the need for supplemental heat is greatly reduced.

Wood is also a renewable resource when managed sustainably, and is often used for home heating fuel. When a forest is managed so that for every tree cut there is a tree planted, a no-net carbon gain occurs. In this scenario, the use of wood as fuel wood is both renewable and environmentally benign.

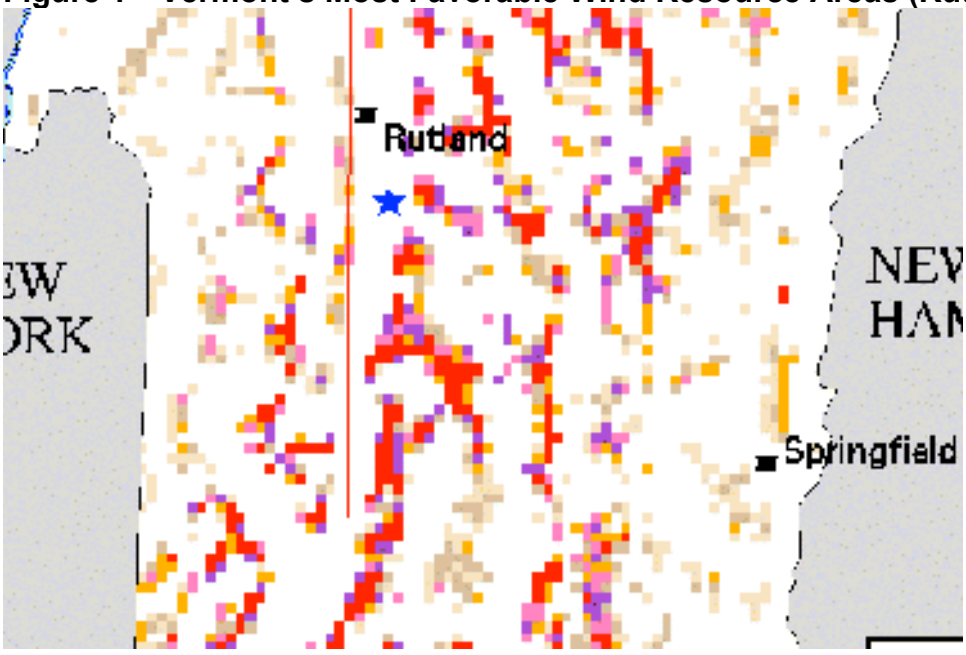
The high ridgelines of the Taconic Mountains in Ira may have wind resources sufficient to power industrial-scale wind turbines. See Figure 1 below. However, construction of large wind towers and related infrastructure such as roads, power lines and staging areas in the Highland Conservation District (shown on the Future Land Use map that is part of this Plan) would wholly undermine the specific goals and polices established for the Highland Conservation District, and should be strictly avoided

Commercial or industrial-scale wind energy development also involves high potential for negative visual impacts and noise, which would directly conflict with provisions of the Ira Town Plan related to scenic resources.

The character of the Town of Ira and surrounding communities is defined by the rural mountain setting, and the pattern of undeveloped highlands. Commercial or industrial-scale wind development in the Highland Conservation District would threaten the orderly development of the region because the effects upon the values sought to be protected in the Highland Conservation District in Ira, and those in adjacent communities necessarily affected by such development, would be profound.

Small scale wind turbines (not required to have strobe lights), appropriately sited and scaled for use by the residence or business located at the turbine, should be allowed in the Rural Residential District.

Figure 1—Vermont's Most Favorable Wind Resource Areas (Rutland Region)



Wind Power Classification

Wind Power Class	Resource Potential	Wind Power Density at 50 m W/m^2	Wind Speed[a] at 50 m m/s	Wind Speed[a] at 50 m mph
2	Marginal	200 - 300	5.6 - 6.4	12.5 - 14.3
3	Moderate	300 - 400	6.4 - 7.0	14.3 - 15.7
4	Good	400 - 500	7.0 - 7.5	15.7 - 16.8
5	Excellent	500 - 600	7.5 - 8.0	16.8 - 17.9
6		600 - 800	8.0 - 8.8	17.9 - 19.7
7		800 - 2000	8.8 - 11.9	19.7 - 26.6

[a] Wind speeds are based on a Weibull k value of 2.0 typical for Vermont.

Source "Wind Resource Mapping of the State of Vermont," (1999). Authored by Ron Nierenberg, Dennis Elliot & Marc Schwartz for the Vermont Department of Public Service, Green Mountain Power Corporation, NRG Systems, and Vermont Environmental Research Associates, Inc.

Telephone Service

Fair Point Communications (formerly Verizon) and Vermont Telephone Co. provide local calling service. Long distance calling plans are provided by a variety of regionally and nationally based companies. Existing lines are located within Town highway rights-of-way, or on private property, with landowner permission and/or easements. The responsibility for maintenance of lines rests with the utility, and not with the Town. There is one cell tower in Ira, located near the peak of Herrick Mountain.

Gas

There is no gas pipeline in Ira. Many homes rely upon bottled or LP gas, on a private contract basis, for heating, cooking and similar uses.

Cable Television

Cable television service is available in some parts of Ira.

Goals and Objectives

Goal
Encourage the efficient use of utilities and energy sources in Ira.

Objective
Prohibit local land filling or disposal of solid waste.

Objective
Support continued use by residents of private solid waste haulers, and encourage recycling.

Objective
Maintain membership in Rutland County Solid Waste District.

Objective
Establish a strong and visible commitment to energy efficiency and increased use of renewable fuels in all buildings, especially new ones.

Objective
Work to create opportunities for walking, cycling, and other energy efficient, alternatives to the single occupant vehicle.

Objective
Encourage residents to utilize the resources of energy efficient programs such as "Efficiency Vermont".

Objective
Encourage the use of renewable sources of energy such as wind, solar, and wood.

Objective
Promote more energy efficient methods of land use and transportation.

Transportation

Introduction

The Transportation Plan is based upon the information and analyses contained in the Transportation Technical appendix.

Present Facilities and Services

Transportation facilities and services in or available to residents of the Town include highways, rail, bus and paratransit, air, and trails for biking and walking.

Primary access to the Town is via Vermont Route 133, an arterial stretching from West Rutland to Pawlet. Not surprisingly, highways are the single most important component of the transportation system. They provide access for automobile and emergency vehicle to all parts of the Town. They also provide for the movement of goods and services, for public transportation, and for recreational activities such as bicycling and walking.

There are 7.25 miles of state highways (VT Routes 4, 4A and 133) and 7.62 miles of Town highways in Ira. The Town's highways are further divided into two classes: Class 3 and Class 4. Ira has no Class 1 or 2 Town highways. The 4.24 miles of Class 3 Town highway are those that are most critical for the Town, in terms of their control. They are routes designed primarily for year-round, local use. They are characterized by lower design speeds and more open access for driveways and multi-use trails. All other routes, private and public, are Class 4 highways. Private roads and trails are maintained by the landowner(s).

FUTURE LAND USE PLAN

Introduction

The Future Land Use Section is shaped by the findings and recommendations made in all other elements of the Plan, as well as by analyses contained in the Technical Appendices. It translates and synthesizes ideas on a wide range of topics into a coherent policy on future development. The Future Land Use Section is where the Town "puts together all of the pieces" of the planning "puzzle."

While goals and objectives and maps help define the Town's vision for the future, the Future Land Use Plan serves as a guide for the creation or amendment of programs (including adoption and amendment of bylaws) that implement the Town's vision. Local land use controls, for example, translate the desired development concept into a clear, attainable, and enforceable land use program.

As required by state law, the Future Land Use Plan contains both text and a Future Land Use Map. The Future Land Use Map displays the desired future development patterns recommended by the Plan, while the future land use text explains the basis or logic for the pattern and the desired sequence of land development. The Map is intended to delineate those areas that are appropriate for specific land uses. The Map defines three districts in Town to serve as guidelines for future development. The Map is based upon information on the physical environment, such as soil depth, seasonal high water tables, slopes and overall capability to support potential development, as well as cultural information that recognizes Ira's historical land use trends, as well as existing land uses.

The Future Land Use Map in this plan is conceptual in nature. The lines showing the edge of districts are not intended to be definite, making it consistent with the generalized nature of the data and analysis used in preparing this plan.

The Future Land Use Plan for Ira contains three land use districts. The physical characteristics of the land in these three districts suggest different planning needs, issues, and community objectives. The districts shown on the future land use map are intended to establish basic guidelines for future land use and intensity. The districts were established in the Ira Town Plan adopted in 1988, and remain unchanged (except for slight changes to the flood plain mapping). The districts are shown on the Future Land Use map that is attached as part of this Plan.

Floodplains and Wetlands District

This district encompasses flood plains and wetlands. In 1988, the Town adopted Flood Hazard Area Regulations that restrict and regulate development within the areas designated on the Town's Flood Hazard Area Map. Those regulations were replaced with updated ones in 2008. The land use map reflects those flood hazard areas, and also includes other areas designated as wetlands, development on which would likely trigger federal or state review. Further reference may be made to the flood plain maps prepared by FEMA.

This District encompasses agricultural soils, as well as deer wintering habitat and sand and gravel resources.

Specific recommendations for the Floodplains and Wetlands District include the following:

- Development should be minimized due to the erosion potential along Ira Brook.
- Setbacks from the brook are encouraged for any development.
- Riparian landowners should be encouraged to pursue bank stabilization projects.

Highland Conservation District

This District serves several purposes. First, it is to protect high elevations and steep slopes that have shallow soils and fragile vegetation, and that provide significant recharge to the ground and surface water supplies of the Town and neighboring communities. Second, the District encompasses much of the land area in Town, which, in light of the physical criteria described above, is unsuitable for development. Third, the District encompasses areas that historically have supported activities or practices such as forestry, limited agriculture (e.g., maple sugaring or maintenance of apple orchards), and recreation including hiking, skiing, hunting, fishing and camping. The district also includes the ridgelines that frame the Town. The fourth purpose is to protect the natural resource value of lands that are undeveloped, lack direct access to arterial and collector roads, are important for wildlife and wildlife habitat (including deer yards), have high potential for forestry use, and include limited or significant natural, recreational or scenic resources. Within the Highland Conservation District lie the sites of five rare, threatened or endangered plants or animals. These important species are dependent on the continued health of their habitats and ecological communities.

Future Development

Historically, residential uses have not fallen within the Highland Conservation District, and there are currently no residences located within this District. Because of the fragile resources and limitations to development, no community facilities or services are anticipated to be developed in the Highland Conservation District. Limited, compatible land uses, such as outdoor recreational activities that do not involve structures, and forestry that does not create erosion problems or harm unique and fragile areas, should be permitted in this District. There are no roads in the Highland Conservation District other than Class 4 roads or trails. These will not be upgraded by the Town for the term of this Plan.

Specific recommendations for the Highland Conservation District include the following:

- All forms of development should be directed to other areas of the Town whenever possible;
- Development that does take place in the Highland Conservation District must avoid important natural areas;
- Public access to important resource areas should be retained as much as possible.

Development in the Highland Conservation District should be limited to very low impact uses. The Town and other major stewards within the district are committed to preserving and making public use of the unique natural environments of the Town in an unobtrusive manner.

Rural Residential District

The remaining portion of the Town falls in the Rural Residential District, which encompasses all existing residential properties, and all lands currently used for agricultural purposes. Historically, these uses have been compatible, and it is anticipated that continued residential, agricultural and commercial uses should take place in the Rural Residential District.

Future Development in this District, low-density residential development that utilizes existing facilities and that can adequately accommodate sewage disposal in compliance with the State law, and that is compatible with the District purposes and guidelines, should be permitted. Further development of new roads in the Rural Residential District is not planned.

The current transportation network of the Town lies entirely within this district. Further development of roads in the Rural Residential District is not planned. Land uses in this District that do not remove the potential of the land for agricultural production such as open space, conservation and certain forms of outdoor recreation, are encouraged. Development should take place in such a way that any irreplaceable, unique or scarce resources or natural areas are not harmed.

The Rural Residential District encompasses some lands designated as unsuitable for development based upon considerations of slope, depth to bedrock and seasonal high water table. Development of such lands is not prohibited, but should be avoided. Development in the Rural Residential District is also likely to be limited by the availability of adequate on-site water supplies.

Specific recommendations for the Rural Residential District include the following:

- Future growth in Ira should be targeted for this district;
- A mix of housing types and affordability levels is encouraged;
- Lot layout and building design should enhance the area's character and help maintain the balance of agriculture, forest and residential uses;
- Water supplies should be protected through careful siting and design of septic facilities.

Development should occur at a density that reflects existing conditions in the district. Wherever possible, the Town encourages developments to use the least amount of land possible for private residential uses in order to help retain land for agriculture and open space.

Compatibility with Adjacent Towns

The Ira Town Plan is compatible with the plans of adjacent communities and with the regional plan. At the heart of any town's plan is its land use plan. A town's statements of values associated with land use including the designation of districts within the town, the enumeration of interests to be protected, encouraged or balanced, and the listing of goals and objectives provide additional insight into the specific land use plan.

A review of neighboring communities' plans reveals that their land use plans are in harmony with that in Ira. In no instance does a district in Ira abut a district in an adjacent town and

contain conflicting values and objectives. Each adjacent community has through its town plan set forth a land use plan including districts, maps, policies and objectives compatible with the land use plan in Ira. Most land along Ira's boundaries with neighboring towns is located in the Highland Conservation District, and abuts lands located in similar districts in adjacent towns. Generally, each town acknowledges that areas characterized by higher elevations or steep slopes involve threats to water supplies and aquifers, wildlife habitat, scenic resources and aesthetics. Land in Ira located near municipal boundaries is generally characterized by steep slopes and high elevations, similar to the land lying over the boundary lines in neighboring towns.

Large scale development in the Highland Conservation District in Ira near municipal boundaries would have a negative impact upon adjacent communities, given the fundamental nature of such lands. They are characterized by steep slopes, so that development impacts including soil erosion and water runoff will result downhill from the developed areas, regardless of where municipal boundaries lie. They are also characterized by high elevations, such that visual and aesthetic impacts will likewise affect areas outside Ira. Large scale development in the Highland Conservation District in Ira near municipal boundaries would conflict and interfere with the goals and objectives stated in the plans of the affected towns, and thus interfere with the orderly development of the region where the towns are located**.**

Goals and Objectives

Goals

Protect fragile areas and resources including the ridgelines and peaks in the Highland Conservation District.

Preserve agricultural land and open spaces.

Accommodate continued patterns of existing land use.

Support or encourage land uses that historically have been compatible with one another and are suited for particular areas.

Channel growth into areas where it can be accommodated without undue adverse impact on the environment, and municipal costs.

Avoid unplanned growth.

Objectives

Continue to enforce existing on-site sewer ordinance and flood hazard area regulations.

Within a given district, regulate to ensure compatibility of all permitted land uses.

Establish zones based on the land use map, and prescribe uses which are or are not permitted within such zones.

Within a given zone, regulate to ensure compatibility of all permitted land uses.

Establish zoning and /or subdivision regulations to permit and control compatible land uses and limit incompatibility of uses.

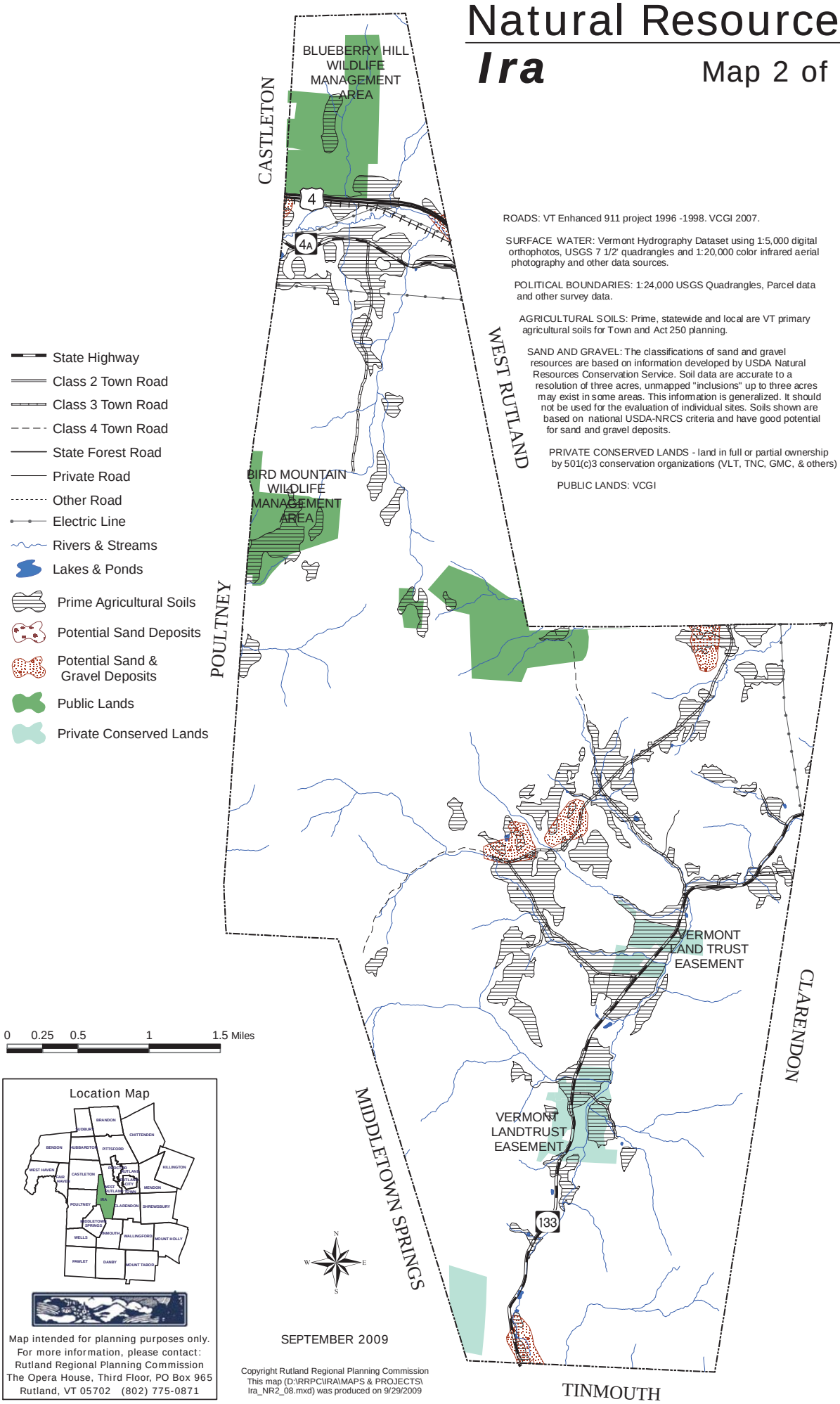
Encourage participation in the State Current Use Value program.

Encourage landowners and private land trusts to develop conservation easements and other methods to preserve lands.

Natural Resources

Ira

Map 2 of 2



ROADS: VT Enhanced 911 project 1996 -1998. VCGI 2007.

SURFACE WATER: Vermont Hydrography Dataset using 1:5,000 digital orthophotos, USGS 7 1/2' quadrangles and 1:20,000 color infrared aerial photography and other data sources.

POLITICAL BOUNDARIES: 1:24,000 USGS Quadrangles, Parcel data and other survey data.

AGRICULTURAL SOILS: Prime, statewide and local are VT primary agricultural soils for Town and Act 250 planning.

SAND AND GRAVEL: The classifications of sand and gravel resources are based on information developed by USDA Natural Resources Conservation Service. Soil data are accurate to a resolution of three acres, unmapped "inclusions" up to three acres may exist in some areas. This information is generalized. It should not be used for the evaluation of individual sites. Soils shown are based on national USDA-NRCS criteria and have good potential for sand and gravel deposits.

PRIVATE CONSERVED LANDS - land in full or partial ownership by 501(c)3 conservation organizations (VLT, TNC, GMC, & others)

PUBLIC LANDS: VCGI

- State Highway
- Class 2 Town Road
- Class 3 Town Road
- Class 4 Town Road
- State Forest Road
- Private Road
- Other Road
- Electric Line
- Rivers & Streams
- Lakes & Ponds
- Prime Agricultural Soils
- Potential Sand Deposits
- Potential Sand & Gravel Deposits
- Public Lands
- Private Conserved Lands

0 0.25 0.5 1 1.5 Miles

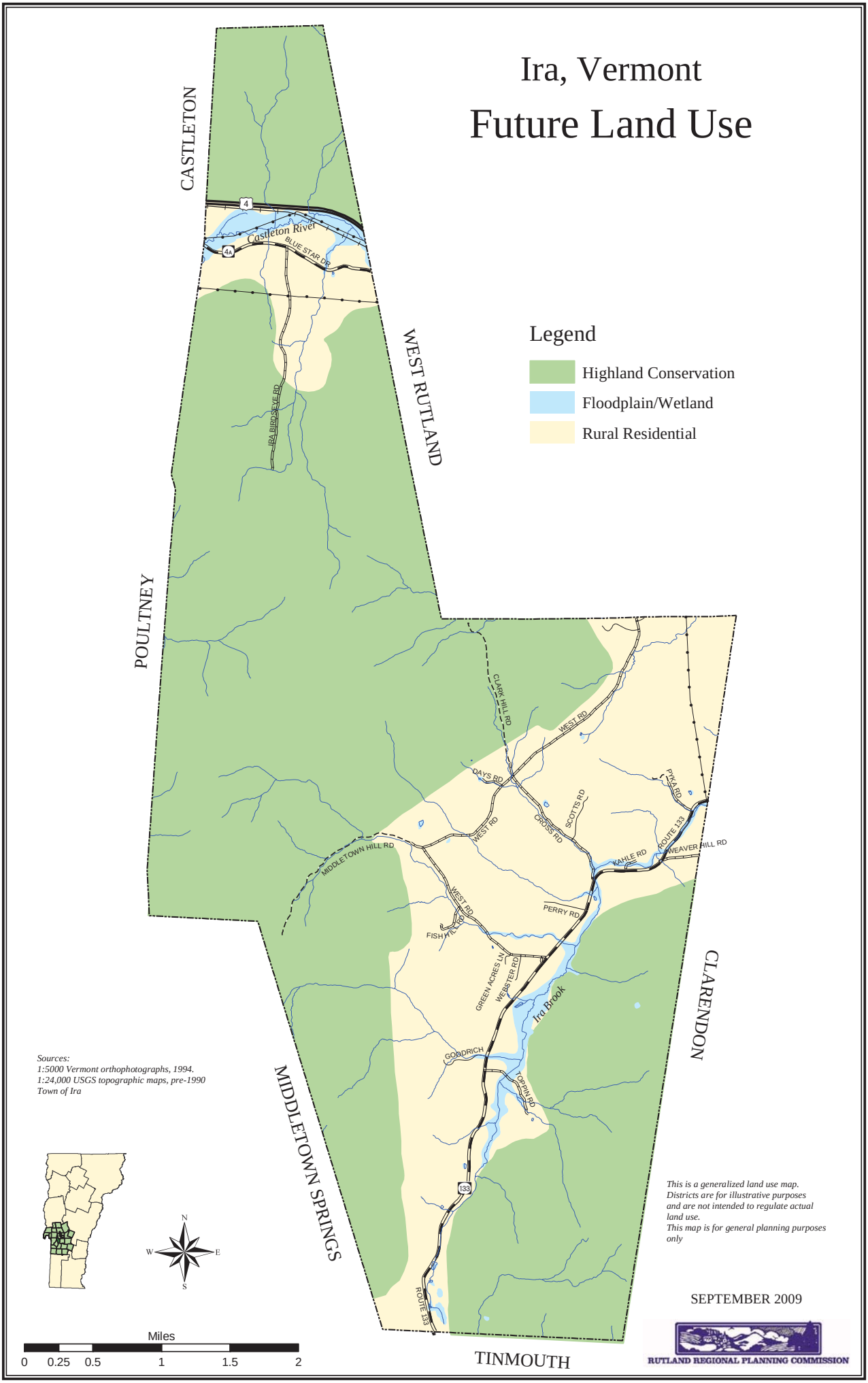
Location Map

Map intended for planning purposes only.
For more information, please contact:
Rutland Regional Planning Commission
The Opera House, Third Floor, PO Box 965
Rutland, VT 05702 (802) 775-0871

SEPTEMBER 2009

Ira, Vermont

Future Land Use



Sources:
1:5000 Vermont orthophotographs, 1994.
1:24,000 USGS topographic maps, pre-1990
Town of Ira

This is a generalized land use map. Districts are for illustrative purposes and are not intended to regulate actual land use.
This map is for general planning purposes only

SEPTEMBER 2009

RUTLAND REGIONAL PLANNING COMMISSION

Town of West Rutland

Town Plan

Adopted November 13, 2012

STATEMENT OF PURPOSE AND OBJECTIVES

The West Rutland 2012 Town Plan update is intended to guide the growth and development of the town. In addition to protecting the public health, safety and welfare of the residents, the policies and goals stated within this comprehensive plan were developed to preserve and protect the town's assets while providing a future vision for all citizens, businesses, and officials living and working within the town.
This plan is readopted on a five-year basis, according to State of Vermont statutes, and its purpose is to set long-range goals and policies for the citizens of West Rutland. At the same time, planning for the future is a continuing activity and should reflect new data, laws, technologies, planning concepts, and the changing needs and desires of the community.
The West Rutland Town Plan was prepared in conformance with the requirements in the Vermont Municipal and Regional Planning and Development Act (*Chapter 117 Section 4382. The plan for a municipality.*) As well, the West Rutland Town Plan is consistent with the Rutland Regional Plan, readopted in April 15, 2008, and is also compatible with approved plans from surrounding communities. Under the authority of the Selectboard, the West Rutland Planning Commission prepared this Town Plan and will submit it for formal approval to the Rutland Regional Planning Commission.

The 2012 West Rutland Town Plan will be implemented through (1) changing and adopting zoning and subdivision regulations and other land use controls, (2) inclusion in the capital improvements budget as part of the town's financial planning process, (3) cooperation with other government agencies, and (4) further studies. An implementation program should be developed in conjunction with the West Rutland Town Plan.

The Plan should be used in a variety of ways. First and foremost the Plan should be a basis for community programs and decision making. For example, it should influence the Town's budget and capital expenditures, community development efforts and natural resource protection initiatives. As required by law, it should also serve as a foundation of local land use controls, such as zoning, subdivision and health regulations.

Furthermore, the Plan should be given full affect in all appropriate regulatory proceedings, including, but not limited to ACT 250 and 30 VSA 248. (Powers and duties of the Department of Public Service and the Public Service Board as to companies other than railroads and aircrafts.)

OBJECTIVES

1. Provide a framework within which detailed planning and regulatory land use controls can be developed.
2. Establish consensus concerning long-term growth potential, objectives, and priorities so that the town can undertake development within a coordinated local and regional context.
3. Improve, diversify, and stabilize the town economic base.
4. Provide adequate public service and facilities, recreational opportunities, housing, and transportation systems to meet existing and future needs.
5. Protect special areas and natural resources from encroaching development.

Civic Involvement

There are many active community groups in West Rutland including the Friends of Town Hall, the West Rutland Historical Society, the West Rutland American Legion, Hiram Lodge #101, the Knights of Columbus, the West Rutland Rotary, Sports Booster Club, and the West Rutland Education Network among others.

Voter turnout in West Rutland, or the percentage of registered voters who cast ballots in the general elections, indicates an active community with a high level of participation and community involvement. In the 1998 general election, 58% of registered voters went to the polls and 71% in 1996.
The changing demographic makeup of the Town of West Rutland, while similar to that of the region and the state will undoubtedly affect municipal priorities. The relatively slow growth, increase in the number of school aged children, and smaller households all influence decisions related to public services such as education, recreation, and health.

NATURAL RESOURCES: *Consistent with the restrictive regulations found in the West Rutland Land Use Plan, our goals are as follows:*

Goal 1
Identify, protect, and preserve the valuable natural areas within West Rutland.

Goal 2
Protect and retain the present amount (no net loss) of significant wetlands, waterways and groundwater resources in West Rutland and enhance the recreation and educational opportunities as well as the natural beauty in these areas.

Goal 3
Maintain high quality groundwater and sufficient yields to adequately serve current and future residents of West Rutland and protect groundwater recharge areas.

Goal 4
Encourage manmade structures to blend into the natural landscape within the entire Town of West Rutland, but not to include ridgelines which are especially sensitive and shall be restricted from any and all development or manmade structure.

Goal 5
Avoid any further fragmentation of large woodland areas and other significant natural resources, and also maintain functioning wildlife corridors between major habitats by minimizing the creation of artificial barriers between natural areas.

Agricultural and Forest Land

Agriculture and silvaculture are not only important economic activities in Vermont, but also are the foundation of a highly valued rural lifestyle and a significant factor in the shaping of the landscape. Land capable of supporting agricultural uses requires prime agricultural soils as well as moderate slope, adequate parcel size, and access. Like agriculture, forestry is an important activity in the state and region. Lands capable of supporting forests are critical to the support of silvaculture as well as providing wildlife habitat and places for recreation.

Forestlands dominate the north-south ridgelines on either side of West Rutland while agricultural lands are in the outlying valleys along the Clarendon and Castleton Rivers.

Town Pump Station	1058 Main Street	.01
West Rutland Fire Station	217 Marble Street	.22
Water Dept. Water Tank	700 Old Town Farm Road	1.40
Water Dept. Watershed	1899 Clark Hill Road	322.00
West Rutland School	713 Main Street	14.10
Old School Lot	Whipple Hollow and Pleasant Street	.50
West Rutland Library Association	595 Main Street	.25
West Rutland Cemetery.	1604 Main Street	90
West Rutland Cemetery	Pleasant Street	
Whipple Hollow Road Cemetery	Bristol's Road	
Old Town Farm Cemetery	North Lane	

TOTAL: 645.38 acres

ENERGY: *Consistent with the restrictive regulations found in the West Rutland Land Use Plan, our goals are as follows:*

The plan shall encourage energy efficiency, recycling, innovative house siting where applicable, and encourage renewable and alternate power and fuel sources within the Town of West Rutland in cooperation with other organizations.

Goal 1
Conserve renewable and nonrenewable energy resources.

Goal 2
Lower the cost of purchased energy by creating fuel purchasing coops for fuel oil, propane, electricity (after deregulation), and firewood.

Goal 3
Investigate possibility of alternative sources of energy and encourage energy efficiency through innovative solutions by both businesses and residences, providing they do not conflict with other aspects of the Town Plan.

Goal 4
Create settlement patterns that reduce travel requirements for work, services, shopping and recreation
The residents of the Town of West Rutland use a variety of energy sources. According to the 1990 Census, the majority of the housing units in West Rutland use fuel oil as the major heating source. Fuel oil, kerosene, and other similar fuels are used in 75.2 % of the units in West Rutland. Bottle, tank or LP gas is used by 10 % of the housing units and is the second largest source of heat. Electric energy is the third major source, which is used by 3.4% of the units in West Rutland. Solar energy and wind power are not utilized to any significant extent.

ELECTRICITY

Green Mountain Power (GMP), a Canadian company privately owned by GazMetro, serves the Town. There are also electrical facilities in Town owned by Vermont Electric Power Company (VELCO). A substation on Barnes Street supplies the electrical distribution system in West Rutland. The transmission system that supplies the area consists of two 46,000 volt lines; one from the Rutland area and one from the Poultney area. In emergency situations the Green Mountain Power system can be supplied from Proctor transmission lines. There are two major transmission corridors and a transmission substation owned by VELCO. The east-west corridor is a 115kV tie from New York State. The north-south corridor is a line from Vermont Yankee Nuclear Plant to the Chittenden County area. The segment from Vermont Yankee to the West Rutland substation is built and operated at 345kV, and the segment from West Rutland to Chittenden County is built and operated at 115kV. The project to extend 345kV to the New Haven, Vermont area is complete. The existing 3-phase distribution covers most of the existing urban compact that is zoned industrial and/or commercial. According to a VELCO study the region has adequate power until 2038 without any further development.

Present Vermont Tariff structures require that developers pay the cost of extending or upgrading electrical facilities to serve the developments. Subdivision regulations require that energy conservation be considered in the planning of developments. Easements must be made for the extension of private utilities such as telephone, electricity and cable television, and public utilities such as water and sewerage where available. Programs, such as Efficiency Vermont, have been developed to further electric conservation for residential, commercial and industrial customers.

NATURAL GAS

Currently, natural gas is not available in West Rutland. There have been many proposals over the years for a natural gas pipeline in Vermont. The town might support natural gas as an alternative energy source/option for both residents and commercial users, but none of the current proposals have any benefits for the citizens of West Rutland.

ALTERNATIVE ENERGY RESOURCES

Utility scale wind or solar, also referred to in this Plan as industrial/commercial wind or solar, is defined as any project that would fall under 30 VSA § 248 and residential wind or solar projects are those which would fall under 24 VSA § 4412, as well as under any of the restrictions within this Town Plan.

Wind, Solar and Water

Solar energy is commonly used for water and space heating. Some use passive solar design to reduce home heating costs by up to 10%. Any alternative energy source should be properly sited, appropriately scaled and implemented in a way as to not conflict with any other portion of the Town Plan. Any industrial/commercial-scaled project should also utilize the input of the citizens of West Rutland and adjacent towns. Industrial/Commercial wind projects are prohibited.

In order to maintain the scenic vistas and aesthetics so important to the character of the community, alternative energy sources, such as wind and solar, should be limited to residential and small agricultural usage. Commercial/Industrial wind development is counter to the aesthetics of the community and is prohibited.

The potential for waterpower exists and should be explored and encouraged if found to be economically feasible.

Recommendations:

1. Make public buildings models of energy efficiency.
2. Publicize information available from Rutland West Neighborhood Housing Services for energy efficiency testing and loans to use toward insulation, windows, etc.
3. Support opportunities for walking, cycling and other energy efficient, non-motorized alternatives to the automobile. (Endorse the proposal for the West Rutland Bicycle Pedestrian Path -March 2, 2000).
4. Support alternative energy sources such as residential-scale wind, water, and solar power or methane gas, provided that they do not conflict with any restrictions in this Town Plan.

RECREATIONAL, CULTURAL, AND HISTORICAL RESOURCES: *Consistent with the restrictive regulations found in the West Rutland Land Use Plan, our goals are as follows:*

West Rutland's historical legacy, especially the marble industry, has allowed for unique nexus of historical, cultural, economic, and recreational opportunities. The remains of the once booming quarries have fostered the growth of an arts community focused on marble carving and sculpture. An integration of the recreational facilities in West Rutland, such as bikeways and pedestrian paths, with the historic and cultural resources in town will likely contribute to economic vitality.

Recreation Goals:

Goal 1
Provide a range of recreational activities for town residents.

Goal 2
Improve and expand existing recreational facilities and programs.

Goal 3
Support the construction of a community center with recreational facilities for the public.

Cultural Resources Goals:

Goal 1
Support the growth of arts, historic, and other cultural organizations in West Rutland. Form a cultural committee to actively promote the cultural resources and local arts community.

Goal 2
Promote the ethnic traditions and values that give West Rutland its character and make it a special place to live.

Goal 3
Recognize the town's cultural resources and historic settlement pattern as a significant, nonrenewable resource that creates a sense of place and community well being.

Historic Resources Goals:

Goal 1
Protect and preserve significant historic structures, sites, or districts as well as prehistoric archaeological sites within West Rutland.

Goal 2
Continue to restore the historic Marble Street District. Create a special zoning overlay to incorporate architectural and historic preservation requirements into the zoning regulations.

Town Tax	**1.1149**	**.6787**
Common Level of Appraisal	**66%**	**100%**

Non-Residential

Tax	**July 2007**	**July 2008**
School Tax	**2.0448**	**1.2874**
Town Tax	**1.1149**	**.6787**
Common Level of Appraisal	**66%**	**100%**

Source: Town of West Rutland

Coordination:

In the past, West Rutland has had very little coordination with the adjacent municipalities. There has been some coordination with neighboring towns concerning road improvements, yet this aspect of planning has not been fully utilized. West Rutland realizes the importance of working with the adjacent municipalities. In order to utilize this facet of intertown planning, West Rutland has established goals for intertown coordination.
Cooperation is a two way street; the cooperation of the neighboring towns is needed in order to reach these following goals.

1. Remain an active member of the Rutland Regional Planning Commission.
2. Control strip development along Business Route 4.
3. Show sensitivity to land use patterns along the town borders.
4. Study the possibility of sharing educational facilities with neighboring towns.
5. Discuss proposals or projects that pose significant increases to truck traffic along highways such as
6. Clarendon Avenue and Route 4A.

West Rutland Town Hall

Public Participation

The participation of West Rutland residents in the local government has been a tradition since the first town meeting in 1887 and even before then when West Rutland was considered part of Rutland City.

The local governments have seen an increase in growth that has increased the responsibilities and demands upon each town. The many committees, boards, and study groups have contributed to the development and advancement of West Rutland.

Public participation was invited from the inception of the planning process and is encouraged in future revisions of the Town Plan and Bylaws.

WEST RUTLAND LAND USE PLAN

The Land Use Districts, defined in the following paragraphs, are a guide for the growth and development of the Town of West Rutland. These land use areas provide for a variety of residential, commercial, agricultural, and recreational opportunities for the future while considering local environmental constraints as well as the existing land use patterns and the historic village center. This is not a zoning plan, although it provides guidance for zoning

changes and updates. The proposed future land use map, designating the boundaries of each district, is an integral part of the Future Land Use Plan.

Village District

The West Rutland village area is the social, civic and cultural center of the town. The pattern of densely settled, mixed use, residential and commercial structures and various municipal buildings is similar to many traditional Vermont settlements. This area also contains a very high concentration of historic structures including the Marble Street Historic District, which is listed in the National Register of Historic Places. This Land Use Plan strives to maintain the economic vitality and compatible mix of residential and commercial uses at the center of the community as well as preserve the historic integrity of the village. Therefore, the following land uses are encouraged within the confines of the village district: a variety of medium to high density residential uses; local, small-scale retail, offices, professional services, and institutions compatible with residential uses; public, cultural and civic uses (post office, town offices, churches, library, historical society, theaters, art spaces/galleries etc.). Pedestrian and bicycle facilities and well as transportation improvements would enhance the atmosphere in the village area and connect the various uses. Streets and neighborhoods that are predominately residential in the Village District should remain residential. Extensive auto related uses, and large-scale, intensive, commercial and industrial uses, which adversely impact the residential and community oriented atmosphere, are not allowed within the village district. Preservation and adaptive reuse of the existing historic structures is a priority in the village district. A historic district designation, or other overlay district, should be developed to identify standards for architecture, streetscape design, and site planning within the village to ensure that new development compliments the existing historic structures, many of which are on the State and National Registers of Historic Places. The Town of West Rutland has a "Downtown Designation" from the State of Vermont for the Marble Street Historic District. This program allows for special grants and other incentives to improve this area.

Industrial District

West Rutland has a limited amount of land suitable for industrial purposes, yet industrial development is desirable in order to expand the town's economic base. Convenient access to rail, power, and the Route 4 divided highway, makes the designated lands appropriate for industrial purposes. There are two distinct industrial districts in West Rutland:

1. The largest industrial land area is located mostly in the vicinity of the previous marble operations. This district is predominantly along the northern length of Marble Street beginning near Thrall Avenue and extending to where the name changes to True Blue Road. The remains of the marble operations, vacant buildings, machinery, and quarries make this a suitable location for industrial redevelopment.
2. Currently, there are several operations within this district including The Carving Studio and Gawet Marble & Granite. There is ongoing conversion and reuse of the remaining marble structures.
3. Extending municipal sewer to this area has been continuing to increase the development potential of the property. Limited commercial uses would be considered appropriate in the industrial district.
4. The West Rutland Industrial Park, located on Sheldon Avenue, was developed in the late 1970's to attract more light industrial operations to town. Currently, there are four companies conducting businesses within the park, but there are still a number of sites yet to be developed.
5. The Industrial Park needs adequate buffers due to its close proximity to residential neighborhoods. Emphasis in all industrial areas should be placed on minimizing adverse impacts from industrial uses (such as noise, vibration, dust, odor, among others). Appropriate buffering from adjoining properties and sitting to minimize visual impacts on the rural landscape is encouraged.

With more demands on the commercial district and lack of available commercial land, the Planning Commission has added Commercial uses to the Industrial District.

Commercial District

Business Route 4, which runs east and west through West Rutland extending into Rutland Town and Rutland City has developed as a linear commercial area, with the exception of a small pocket of rural properties remaining in the vicinity of Pleasant Street. This Plan proposes to maintain the commercial character of this area, and extend the commercial district the length of Business Route 4 between the Village and the border with Rutland Town and the

Jagazinski Farm. Extending sewer and water lines to the commercial district would also increase the development potential. This Commercial District is the appropriate location for local and regionally oriented businesses and services that require good automobile accessibility.

Development projects which enhance the cohesiveness of the Business 4 corridor, especially since it serves as a major "gateway" to West Rutland, both at the entrance/exit to the Route 4 Highway and at the border with Rutland Town, should be considered a priority. Most of the parcels along this corridor are highly visible and consideration should be given to site development and design. Access points and curb cuts should be designed to insure that Business Route 4 continues to serve as an important transportation link with neighboring communities.

Residential District I -

"Neighborhood Residential District"

The district should be served by municipal water and sewer and is suitable for medium density residential development including subdivisions, multifamily structures, condo/townhouse units and mobile home parks in addition to single family homes. Every effort should be made to provide "neighborhood amenities" such as sidewalks and "pocket parks", among others, in this area of medium density residential development.

Residential District II -

"Farming/Agricultural and Rural Residential District"

This district is intended to provide land area for low density residential development, farming, forestry, recreation and other rural land uses. A large portion of this district is not served by municipal sewer or water and necessitates low density. Growth should be managed and consistent with the rural character of the area, the availability of municipal services, and site conditions. Conservation of open spaces and natural resources should be a high priority.

Protection and support of the remaining farms are important component of this district's provisions, therefore, uses compatible with agricultural operations should be encouraged. For example, roads should be maintained to permit easy transportation of commodities and to accommodate farm purposes.

Conservation Districts (I and II)

Conservation areas contain lands that are very sensitive to development for a variety of reasons. They are generally characterized by significant natural resources such as dense forests, steep hills often with shallow soils, wetland areas and stream banks, among others or areas of scenic, cultural or historical significance.

These lands have been divided roughly into two conservation districts denoting the sensitivity of the land.
The Town of West Rutland has designated a "Ridgeline Overlay" to protect the scenic vistas within the Town. In general, buildings shall be sited below ridgelines and below any sight lines to the ridgeline, so that they do not intrude upon the skyline and vistas. New development should blend into the natural landscape.

Conservation District I

This land serves as a buffer zone between the most restrictive of the land use areas and the other districts. Development above the 800foot contour has been designed to blend and harmonize with the landscape. Natural features such as forests, meadows and ridgelines should be conserved, and development shall be clustered in more appropriate areas.

Roads should follow natural contours, and not carve straight lines across the landscape. Shared driveways are encouraged, as they minimize the number of curb cuts along public roads and are economically and ecologically more efficient.

Conservation District II

This is the most restrictive district containing lands on which development would have a very detrimental effect. These include lands above the 1,000foot contour, lands that are very steep, and lands that are in the floodplain.

Additional areas may be included in this district if there are considered to have unusual value to the town. These areas are suitable for low impact recreational uses, such as nature and hiking trails, etc. but intensive recreational activities, such as "four wheeling", are not appropriate in conservation areas. Development above 1,000 foot contour should be extremely limited. Industrial/Commercial wind development is prohibited. Steep slopes, the availability of water, and the difficulty of onsite sewage disposal are serious issues for residential development at high elevations.

Town of Rutland Municipal Plan

Adopted X/X/2014

LAND USE

The purpose of the land use districts in this chapter is to guide development in Rutland Town. The Land Use Districts are shown on the Land Use Map entitled Town of Rutland, Vermont Land Use Map, which is incorporated by reference as a part of this Plan.

The districts were derived from the combination of the following:

(1) Existing land use patterns.

(2) The goals and objectives for accommodating future growth.

(3) The suitability of the Town for various prospective land uses.

Throughout the districts, a choice of housing, employment, shopping, educational, recreational, and cultural opportunities should be provided, with support from economical and high quality governmental and public utility facilities and services.

Information in this chapter and corresponding map shall be used to guide development, especially during the Act 250 and Section 248 review process. In absence of zoning regulations, uses and density requirements described below shall be adhered to for all new development. Any Act 250 application or Section 248 application for a Certificate of Public Good proposing a use of land not in compliance with the land use districts described below and the Land Use Map will not be supported by the town.

Land Use Districts

[Any use not stated as "permitted" is prohibited.]

R40A - Neighborhood Residential **-** Minimum lot size: 40,000 square feet.

Description: Areas of existing settlement within the town, selected adjacent areas, and areas suitable for modest density residential development.

Purpose: To maintain the traditional social and physical character of these areas.

Permitted uses: Single and two-family dwellings, accessory facilities, and home occupations. One housing unit and one accessory unit are permitted per lot.

Development Density. Up to one residential unit and one accessory unit per 40,000.

R40B - Planned Residential **-** Minimum lot size: 40,000 square feet where water and sewer service not provided; 20,000 square feet where water and sewer service provided.

Description: Lands which are suitable for higher residential intensity development because of their suitability for on-site sewage disposal and/or the presence of municipal sewer systems.

Purpose: To provide for higher density residential development in areas that are suitable for such development due to the capability of the land or the presence of public sewer facilities.

Development Density. Up to one residential unit per 10 acres.

CNS - Conservation - Minimum lot size: 25 acres.

Description: Special forest and/or open lands which are of particular ecological or aesthetic importance. Includes public watersheds as well as certain lands that are not well suited for residential or commercial development because of topography, soil composition, or wetlands.

Purpose: To preserve certain forest and open lands in a relatively undeveloped state and/or to protect public watersheds, wetlands, and water supplies.

Permitted uses: Same permitted uses as allowed in R40A District, plus recreation uses.

Development Density. Up to one residential unit per 10 acres.

C - Commercial - minimum lot size: 40,000.

Description: Land that is suitable for commercial uses.

Purpose: To house a variety of retail and other commercial services in suitable locations to meet the needs of local and regional residents. The character of the area should be protected and enhanced with the provision of landscaping and screening. The scale of development in this district should be compatible with adjacent commercial and residential structures.

Permitted uses: Commercial uses and all uses permitted in R Districts.

IC - Industrial/Commercial- Minimum lot size: 40,000 square feet with sewer service, 80,000-sq. ft. without sewer service.

Description: Existing industrial and commercial developments that are serviced by public sewer and have access to arterial highways and/or rail facilities.

Purpose: To accommodate the expanding retail and industrial sectors of the town. Provides for employment opportunities in manufacturing, warehousing, research and development, and commercial uses which specifically serve the industries or their employees in areas serviced by good transportation facilities and public utilities.

Permitted uses: Industrial and commercial uses including light manufacturing and distribution of goods and materials, and all uses permitted in R Districts.

Municipal/Government/Utility

Description: Lands currently used or planned to be used, for municipal and governmental purposes, including schools, town offices, fire stations, police headquarters, recreation facilities, landfills, salt storage facilities, highway maintenance garages, cemeteries, and fire districts. Includes developed and undeveloped land owned by electric utilities.

- ***Improve energy efficiency of town operations as well as public, commercial and residential buildings.***
- ***Promote energy efficient land use development and transportation patterns***
- ***Educate and encourage citizen participation in conservation programs.***

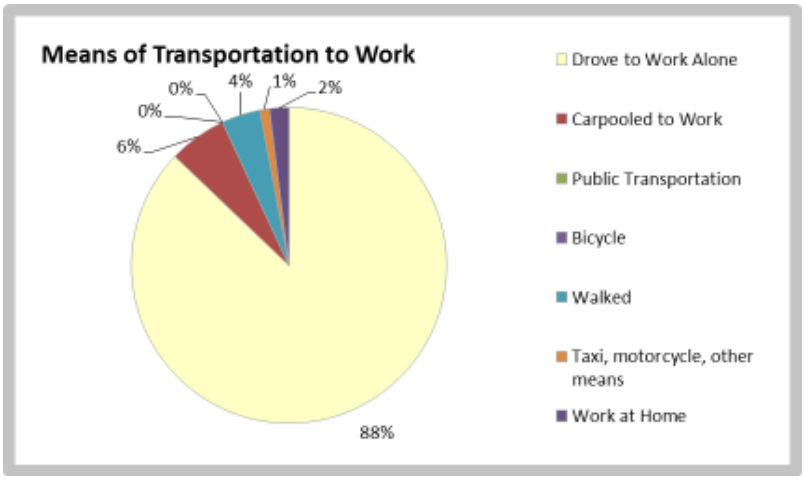
Energy Use

The three primary sources of energy use in Vermont are electricity, transportation, and residential heating and cooling.

Electricity is provided by Green Mountain Power and VELCO, which owns and operates the transmission lines. VELCO is headquartered in Rutland Town and GMP operates a major systems and operation center in the town. Several public and private organizations, such as Efficiency Vermont, operate to educate consumers about conservation and to provide technical assistance to consumers seeking to reduce their energy consumption.

Transportation is a significant consumer of energy in the Rutland Region and Vermont as a whole, due to our rural nature and mountainous terrain. The private automobile is the primary source of transportation energy consumption. According to the US Census, the mean travel time to work in Rutland Town in 15.6 minutes.

Reducing energy for transportation will mean promoting use of more efficient vehicles and the development of compact centers with support the density to encourage other means of travel, such as bicycle and pedestrian. According to the Urban Land Institute, compact development patterns reduce vehicle miles traveled by 20%-40%.



Residential heating accounts for approximately 1/3 of the energy use in Vermont. According to the US Census, 72% of the home heating fuel type in Rutland Town is with non-renewable sources such as fuel oil and kerosene.

Renewable Energy Production

Energy in the form of "renewable" sources can provide significant amounts of clean energy. Developing these resources is critical, as currently, the total amount of energy that can be extracted from renewable sources is significantly less than what we currently obtain from fossil fuels. To maintain quality of life, vibrant communities and prospering economies, the town will have to develop conservation strategies that use remaining non-renewable fuels wisely to transition to a society that uses more energy obtained from clean and renewable sources.

Wood: Approximately 9.1% of homes in Rutland Town used wood as their primary heating source in 2012, according to the US Census. Presently, Vermont's forests could supply many more households with wood for heating. According to statewide guidelines, each forested acre of land in the Town could probably sustain a harvest of about 1.3 cords per year if fuel wood production was the primary objective. About 0.6 cords of fuel wood per acre per year could be expected if high quality saw timber was the primary objective.

Solar: Solar energy is the most commonly used source of renewable energy, although less than 1% of Vermont homes use solar for heating. In Rutland Town, energy use from solar electric generation facilities is being provided on two scales: 1) on-site applications and small group net-metered systems for residential, commercial, government and industrial establishments to offset costs and 2) large-scale systems (some group net-metered) which feed power back into the grid but do not serve a localized area. Most small systems are exempt from local land use bylaws and larger systems are reviewed and permitted by the Public Service Board, pursuant to 30 V.S.A. §248.

The Town of Rutland has adopted Solar Facility Siting Standards, which are located at the end of this chapter. The standards shall be given full consideration during Public Service Board review and permitting of solar electric generation, and other large-scale energy generation facilities in Rutland Town.

Wind: Large and small wind energy generation is occurring more frequently in Vermont. Large scale wing energy projects have been explored or proposed in surrounding towns. As a result of the Town's physical setting, primarily in valley areas, there is greater potential for smaller-scale wind power than for large-scale projects. A recent study of wind speeds throughout the State of Vermont indicated that the eastern border of Rutland Town could have suitable wind speeds for large-scale wind generation.

Similarly to solar energy production, most small systems are exempt from local land use bylaws and larger systems are reviewed and permitted by the Public Service Board, pursuant to 30 V.S.A. §248. Standards in the Solar Facility Siting Standards apply to wind energy generation and shall be given full consideration during Public Service Board review and permitting of solar electric generation facilities in Rutland Town.

Hydro: Rutland Town is home to three hydroelectric facilities, all operated by Green Mountain Power. One is the former Vermont Marble site in Center Rutland; another is the reactivated Glen Station at the Mill Village site; and the third is at Patch Pond.

Energy Strategies

- Investigate and promote methods to reduce energy consumption by individuals, businesses and municipal operations.
- Conduct energy-saving retrofits to municipally owned facilities.
- Encourage all new residential and commercial construction to meet energy standards.
- Educate residents and builders on energy-conserving construction techniques for new buildings.
- Encourage the development of renewable energy resources, in appropriate locations and meeting the standards set in the Solar Facility Siting Standards.
- Encourage small-scale solar and/or other renewable energy production methods.

See 30 V.S.A. §248(b)(1).

The PSB must also determine whether a proposed solar facility will have an undue adverse effect on aesthetics, historic sites, air and water purity, the natural environment, the use of natural resources, and the public health and safety, with due consideration having been given to the criteria specified in 10 V.S.A. § 1424a(d) (outstanding resource waters) and the Act 250 criteria set forth in 10 V.S.A. §6086(a)(1) through (8) and 9(K).

See 30 V.S.A. §248(b)(5).

To determine whether the proposed solar energy facility would have an adverse impact on the considerations set forth as identified in:

§248(b) (5) above, PSB Rule 5.108(A) requires the PSB to conduct the so-called "Quechee analysis" to assess whether a proposed solar project would have an adverse impact by virtue of being "out of character with its surroundings," and if so, whether the adverse impact qualifies as "undue." Rule 5.108(A). The PSB therefore must consider "the nature of the project's surroundings, the compatibility of the project's design with those surroundings, the suitability of the project's colors and materials with the immediate environment, the visibility of the project, and the impact of the project on open space." Rule 5.108(A)(1).

A solar project's location, size, and visibility, together with the context of the surrounding land uses, will be relevant in the PSB's consideration of whether the proposed project would have an undue adverse impact. Among other things, the Quechee analysis requires the PSB to consider whether the proposed project would violate a "clear written community standard".

Therefore, the effective participation of the Rutland Town in the PSB's review process requires the development of specific community standards in order to ensure that local conservation and development objectives are considered and weighed by the PSB in its review of a CPG application for a solar energy facility. Toward that end, the Rutland Town Planning Commission has developed the following specific community standards for the siting and development of a solar energy facility in Rutland Town.

RUTLAND TOWN COMMUNITY STANDARDS REGARDING ENERGY FACILITIES

Purpose

The purpose of these community standards is to regulate the development of renewable energy resources and solar energy facilities in Rutland Town. These policies should also be considered in undertaking municipal solar energy projects and programs, in enacting or updating the town's bylaws to address renewable energy development and in the review of new or upgraded energy facilities and systems by the town and in Section 248 PSB proceedings.

GOALS

1. Promote sustainable development in Rutland Town by reinforcing traditional land use patterns and municipal development policies, maximizing energy conservation through weatherization of existing structures and appropriate siting of new development, encouraging appropriate development and use of renewable energy resources, protecting natural and cultural resources.

2. Ensure the long-term availability of safe, reliable and affordable energy supplies to meet the needs of the town and neighboring communities.

3. Reduce municipal energy consumption and costs, community reliance on fossil fuels and foreign oil supplies, and greenhouse gas emissions that contribute to climate change through increased

energy and fuel efficiency, energy conservation, and active transition to alternative fuels and renewable energy sources.

4. Sustainably develop Rutland Town's renewable energy resources and local distributed energy generation capacity – including municipal and community generation and supporting smart grid technology – consistent with adopted plan policies and community energy facility and siting standards.

5. Avoid or minimize the adverse impacts of energy development on public health, safety and welfare, the town's historic and planned pattern of development, environmentally sensitive areas, and Rutland Town's most highly valued natural, cultural and scenic resources, consistent with adopted plan policies and community standards for energy development, resource protection and land conservation.

POLICIES

1. Encourage energy efficiency and conservation as primary considerations in new municipal construction projects, equipment purchases and operations. Life cycle costing shall be used by the town in evaluating capital expenditures as appropriate.

2. Encourage, to the extent practical, the use of energy efficient municipal vehicles (e.g., hybrid, bio-diesel).

3. Development should be directed toward designated growth centers and limited in the least accessible areas of the community to minimize the need for new road infrastructure and reliance on the private automobile.

4. Support land use and conservation policies that encourage ongoing forest management to maintain a local source of fuel-wood.

5. Support land use and conservation policies that encourage agricultural uses on prime agricultural soils to increase the supply of and access to locally produced food and reduce the total food transport miles required to sustain Rutland Town families.

6. Encourage small scale and appropriately sited development of renewable energy generation solar panels. Such encouragement should consider, but not be limited to the prevention of:

   A. Undue adverse visual impacts on adjacent properties, scenic corridors and Rutland Town view sheds;

   B. Forest fragmentation, environmental degradation, and habitat disruption;

   C. Impacts to sediment transport and aquatic organisms' passage in streams;

   D. Their use of land with prime agricultural soil.

7. Prohibit free-standing solar generation structures on forest land above 1000 feet elevation.

8. The town – in collaboration with the Rutland Regional Planning Commission, neighboring communities and utilities serving the town – will participate in long- range utility. Planning to ensure that adopted plan policies and community standards are identified and considered in future energy planning and development.
9. Existing and proposed municipal policies, programs and regulations will be evaluated for their effect on municipal energy use, and revised as needed to promote reduced energy consumption, increased energy efficiency, and the sustainable development and use of local renewable energy resources.

10. Energy and fuel efficiency will be primary considerations in municipal construction projects,

- Roof or building-mounted systems on a historic building shall not physically damage the structure or alter its character-defining features.

- Roof-mounted installations shall be placed below and behind existing parapet walls. Panels are to be mounted flush with and at the same existing angle as the existing sloped roof surface. On flat roofs solar panels shall be set back from the edge of the roof to minimize visibility.

NATURAL AND CULTURAL RESOURCES

Introduction

Before a community can plan for its future, it must identify natural and cultural resource assets and create clear standards for their protection. Natural and Cultural Resources are shown on Natural Resource Maps #1 and #2, which are hereby incorporated with this plan.

Goal:

- ***Protect natural and cultural resources from the impacts of development, while maintaining access to and appropriate use of those resources.***

Agricultural Resources

Although agriculture has been a prominent land use in the town since its original settlement, large-scale agricultural use of land has been steadily decreasing due to the proximity to Rutland City, demand for housing, and the increasing economic pressure on farmers within Vermont. Agricultural are located primarily along Otter Creek in the west/southwest sector of town and between North Grove Street and East Pittsford Road/Blueberry Lane in the north sector. A recent upswing in smaller-scale agricultural activities has increased the number of farms in the region and is supporting a growing agricultural economy.

An analysis of settlement patterns in Rutland Town indicate that only a small number of structures are currently standing on the highest quality soils in the community. Land designated as “prime” agricultural lands comprise 22% of the town’s total and land. 17 structures (1%) of the total number of buildings in town are located on what are considered to be prime or statewide agricultural soils.

Forest Resources

Most of the forestland is located on slopes bounded by West Rutland and Proctor to the west and by Mendon to the east. There is a small amount of valuable timber, but most of the land is used as a scenic and recreational resource--hunting, hiking, bicycling, and cross-country skiing.

Like high quality agricultural soils, high quality forest soils are scattered throughout the Town. High quality forest soils are not limited to any particular land form. It is important to note that many soils classified as having high potential for agricultural production may also have high potential for forestry. This is because many of the physical and chemical characteristics that make land productive for annual crops are also desirable for tree growth.

impairment to surface waters in the Rutland Town. Unlike point source pollution, such as a direct discharge or outfall pipe, non-point source pollution is more diffuse, harder to quantify and more difficult to control. Examples of these are runoff from parking lots, back roads, fertilized lawns, and runoff from agricultural fields. It has been well documented that urban and suburban non-point sources contribute more phosphorus and sediment per acre than runoff from the working landscape.

Natural and Cultural Resources Strategies

Land Resource Strategies

- Incorporate measures that provide protection for land resources during development
- The Town's primary agricultural soils should be conserved for agricultural uses if they are economically viable; development should be steered away from prime agricultural soils.
- Forested lands should be conserved to protect against erosion and to preserve their scenic and recreational qualities.
- Wildlife habitats in the Town should be conserved; the impacts of development and land use change on these habitats should be minimized through the use of conservation easements, purchase, lease, tax incentives, or other measures. prohibited
- Land development is discouraged on slopes greater than 15%.
- Sand and gravel operations should be carefully reviewed to ensure the public's safety and freedom from noise, dust, traffic and other intrusions in residential areas.
- Identify other lands to prevent flooding by maintaining vegetated buffer strips in riparian zones surrounding streams and rivers; maintaining; upland forests and watersheds for predominately forest use; and requiring new development to preserve vegetated riparian buffer zones that are consistent with state riparian buffer guidelines.

Historic Resource Strategy

- Preserve historic structures and scenic, cultural, recreational, and unique natural resources during development.

Water Resource Strategies

- Protect water resources so that water quality is maintained, access is preserved, erosion and encroachment are minimized, and public interests are advanced.
- Gravel aquifer and wellhead areas should be protected from development that would pollute or restrict the flow of water through porous soils.
- Any use or development proposed to be located within or adjacent to the watershed of a public water supply or community well system shall be carefully reviewed for potential detrimental effect to both the quality and quantity of the supply.

- No development or earth disturbance of any kind should occur within fifty (50) feet of any shoreline and no on-site septic disposal facilities should occur within one hundred and fifty (150) feet of any shoreline.

- Development in Special Flood Hazard Areas and Fluvial Erosion Zones shall be discouraged.

- Land development resulting in the loss of wetland storage capacity, or impacting negatively on water quality is discouraged.

- Work to develop more consistent, accurate and thorough identification of wetlands areas through the use of best available data and the adoption of local wetlands regulations and updated maps.

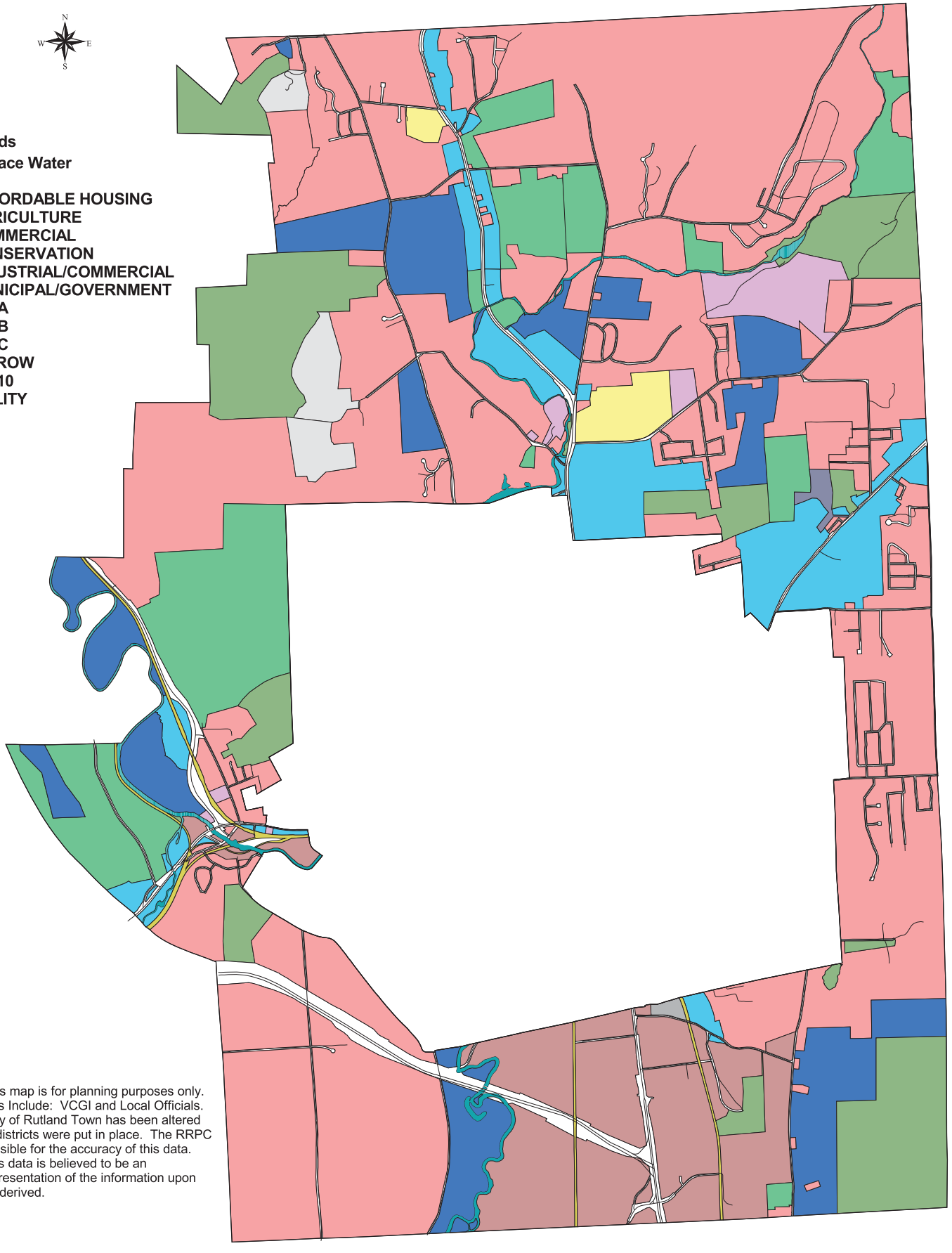
- Enhance subdivision regulations to protect wetlands and prohibit structural development or intensive land uses in Class One or Class Two wetlands unless there is an overriding public interest.

- Land development , including the construction of roads, that results in the loss of wetland storage capacity~~,~~ or negatively impacts water quality is discouraged.

- Consider creating a Regional Watershed Stormwater Management group with other area jurisdictions to reduce runoff pollution into local waterbodies.

- Reduce the percentage of impervious surfaces by limiting the number of rooftops and paved areas, by using permeable surface materials, employing disconnection practices, and by implementing Low Impact Development (LID) principles and other methods to increase stormwater retention and infiltration.

RUTLAND TOWN



NOTES: This map is for planning purposes only. Data Sources Include: VCGI and Local Officials. The boundary of Rutland Town has been altered since these districts were put in place. The RRPC is not responsible for the accuracy of this data. However, this data is believed to be an accurate representation of the information upon which it was derived.

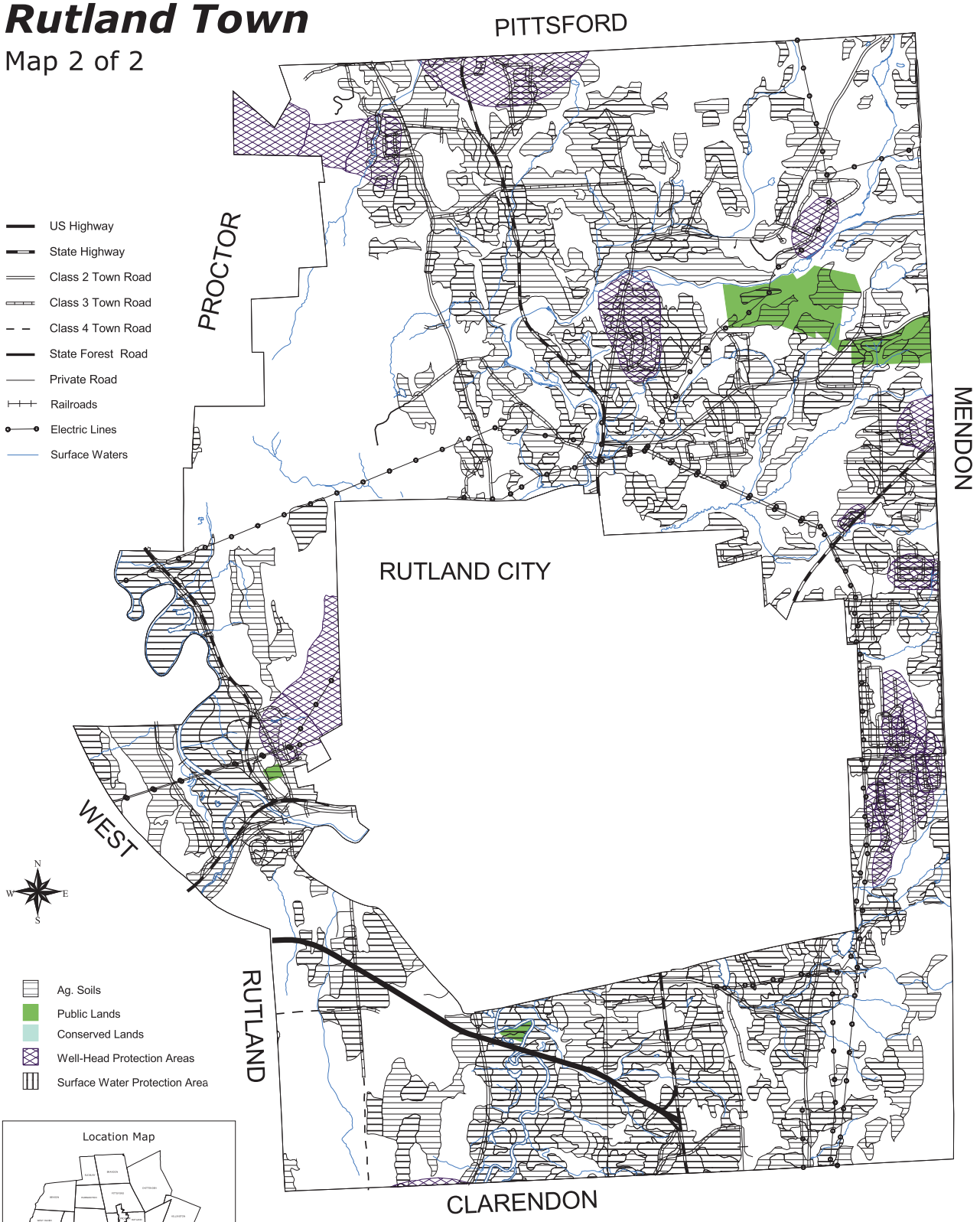
RUTLAND REGIONAL PLANNING COMMISSION

C:\Jami (Snapdragon) February 2004

Natural Resources

Rutland Town

Map 2 of 2



Location Map

RUTLAND REGIONAL PLANNING COMMISSION

GVS

Vermont Coordinate System, Zone 5526, Transverse Mercator, NAD 1983.

Map intended for planning purposes only.

For more information, please contact:
Rutland Regional Planning Commission
PO Box 965, The Opera House, Third Floor
Rutland, VT 05702 (802)775-0871

POLITICAL BOUNDARIES: 1:24,000 USGS Quadrangles, VCGI, 1991.

ROADS: VT Enhanced 911 project 1996 -1998.

SURFACE WATER: Interpreted from 1:5,000 orthophotos using USGS 7 1/2' quadrangles and 1:20,000 color infrared areial photography as additional source material.

PUBLIC/CONSERVED LANDS: Vermont Conserved Lands Database 1:5,000 parcel data, UVM-SNR-SAL, 1999.

SOILS (Prime and Statewide Ag without Hydric):Optically scanned from 1:20,000 USDA-NRCS soil maps, 1981.

WELLHEAD PROTECTION AREAS: SPA's for groundwater sources (wells, springs), 1:24,000 USGS QUADRANGLES, VANR-DEC- Water Supply Division and VT Department of Health, 1998.

SURFACE WATER PROTECTION AREAS: SPA's for surface water sources (stream, pond, etc.) 1:24,000 USGS quadrangles, VANR-DEC-Water Supply Division and the VT Department of Health, 1998.

SOURCE PROTECTION AREAS: Surface and subsurface areas from or through which contaminates are reasonably likely to reach a public water source. GPS coordinate information 1994. Halliburton NUS Corp. original dataset: 1:24,000 USGS quadrangles, VT Department of Health. SPA's for planning purposes only. Refer to the VANR-DEC, Water Supply Division, for official SPA determinations. (802) 241-3400.

0.5 0 0.5 1 Miles

January 2002

Town of Clarendon

Town Plan

Adopted March 22, 2010

Goals and Objectives to Guide Future Growth

The Town will work to achieve the following goals and objectives:

Encourage rural character by maintaining the historic settlement pattern of more densely settled villages and neighborhoods.

Nurture economic activity that provides satisfying and rewarding job opportunities while maintaining high environmental standards.

Provide and maintain a transportation system that is safe and efficient and meets the needs of all segments of Clarendon's population.

Protect and preserve significant historic structures, sites, or districts, as well as archeological sites.

Minimize energy consumption. Reduce reliance on nonrenewable energy sources. Assure that energy development is environmentally neutral and does not impact the health of residents and does not result in a negative impact on property values.

Encourage housing that is conveniently located to public facilities and services, and employment and commercial centers and meets the needs of a diversity of social and income groups.

Policies for the Preservation of Natural and Cultural Resources

The Town will work to observe the following policies:

Agricultural and Forest Lands and Mineral Resource Areas

Encourage the continued use of agricultural lands for food production and other agricultural purposes.

Support management of forestry resources.

Work in cooperation with owners of mineral resources to develop policies for resource use and extraction that would help insure that such activities do not adversely affect the quality of life enjoyed by residents of the surrounding area. Require that extraction areas are suitably graded and reclaimed with proper vegetation when operations cease.

Wildlife Habitat, Fragile Areas and Geologically Significant Locations

Identify and preserve important natural features of the Clarendon environment, such as deer wintering areas and large, unfragmented forested areas and undeveloped ridgelines. Protect resources from uses and settlement that would reduce their vital functions. Minimize impacts of development on wildlife habitat, fragile areas and geologically significant locations.

Promote long-term protection of major habitats through conservation easements, purchase, lease, tax incentives, or other measures. Protect ridgelines from industrial development and associated infrastructure.

Rivers and Streams

Discourage development in areas of high erosion potential, such as steep slopes and ridgelines and high susceptibility to surface water pollution that would disrupt the uses or ecological functions of stream corridors.

Ponds

Coordinate with neighboring towns and with public agencies that have jurisdiction over Clarendon's surface water quality.

Promote the creation and maintenance of undisturbed, naturally vegetating buffer strips on the banks of surface waters.

Wetlands

Promote protection of wetlands of importance to the town; retain wetlands in their natural state and ensure new development is located and designed so that it will not impair the values and functions of wetlands.

Groundwater

New development and land use activities should not impair groundwater quality or exceed the capacity to supply adequate groundwater yields or reduce the permeability of the groundwater supply recharge areas.

Energy Conservation

Encourage settlement patterns that reduce travel requirements for work, services, shopping and recreation. Promote opportunities for walking, cycling and other energy efficient, non-motorized alternatives to the automobile. Encourage energy efficiency in residential and public buildings so as to reduce dependence on energy sources.

Cultural Resources

Support the protection of historic sites and landmarks. Regard the town's cultural resources and historic settlement pattern as significant, non-renewable resources that create a special sense of place and community well being.

Cooperate with historians and archaeologists researching Clarendon's past.

Land Use Plan

The growth of Clarendon is apparent; populations will increase, the use of the land will change and the demand and need for community services will increase. The principal objective of sound, rational land use planning is to accommodate this anticipated growth while minimizing the adverse impacts on the land, the environment and public and private investments.

The following districts - displayed on Map 2 - are proposed to ensure these objectives. They will also serve as the basis of zoning regulations in the Town of Clarendon.

Conservation District

The purpose of the resource district is to protect the critical and natural resource value of lands that are essentially undeveloped; are important to wildlife and wildlife habitat, and may be unsuitable for land development. This will include irreplaceable, limited, fragile or scenic resources that abut adjoining conservation areas. Extension and continued protection of existing conservation areas such as Potter's Farm and Ira's High Ridgeline Conservation District will be encouraged. Class 3 roads will continue to be maintained in their present state.

Residential and Commercial District

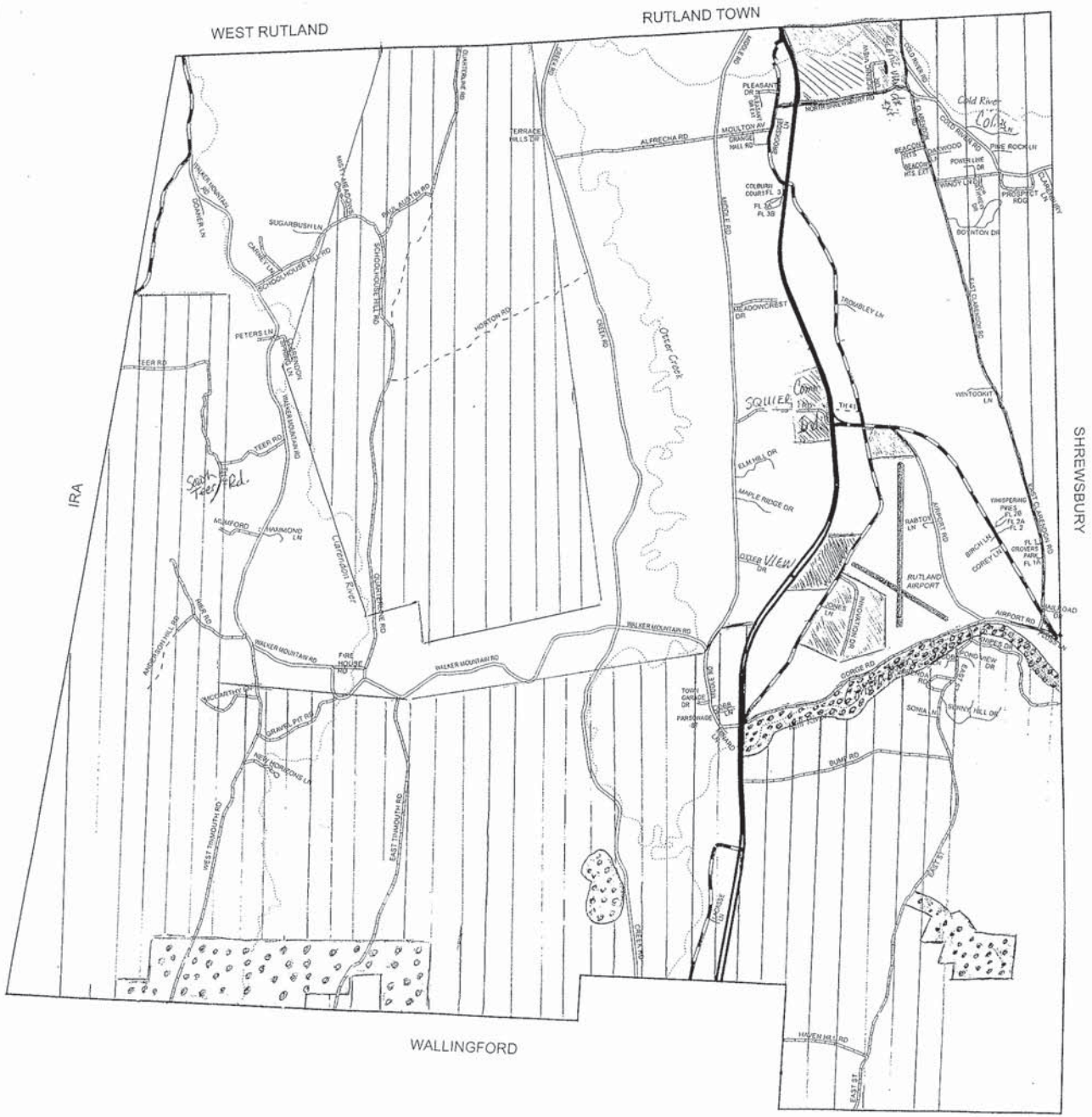
The purpose of this district is to maintain residential areas and allow commercial/retail enterprises. The commercial/retail uses will have adequate parking; suitable landscaping, screening, lighting and signage; and be designed to minimize traffic impacts in order to protect the character of the neighborhood.

The residential portion of this district is to allow for residential and commercial/retail uses at densities appropriate with the physical capability of the land and the availability of community facilities and services. Other uses incompatible with residential and commercial uses, such as industrial and/or manufacturing shall not be allowed for the health, safety and welfare of the community.

The village area of the town shall be supported by the ideals of this district. The village has a role in our community by being a social and economic activity center. This area will also be able to provide for residential, commercial and other compatible development that serves the needs of the community. Such development should occur at densities and uses that will maintain the traditional, social and physical character of the village and that will not exceed the capability of the lands, waters, services and facilities.

Commercial and Industrial District

The purpose of this district is to encourage uses including but not limited to manufacturing, commercial/retail, warehousing and research and development. The district is to be served by good transportation facilities and so that surrounding districts shall not be adversely affected. Other uses incompatible with industrial uses, such as residential, should be discouraged for the health, safety and welfare of the community.



CLARENDON, VERMONT

MAP 2 - FUTURE LAND USE

Legend

- US Highway
- State Highway
- Class 2 Town Road
- Class 3 Town Road
- Class 4 Town Road
- State Forest Road
- Private Road
- Other Road
- Surface Water

- Agricultural + Rural Residential District
- Residential + Commercial District
- Commerical + Industrial District
- Conservation District

Miles

0 0.25 0.5 1 1.5 2

LOCATION MAP

N W E S

RUTLAND REGIONAL PLANNING COMMISSION

Town of Shrewsbury
Town Plan

Effective November 2013 – November 2018

Use of the town plan is not limited to regulations and adopted capital budgets. A wide range of projects, sponsored by the town itself or groups serving the town can implement the goals of the plan to ensure that Shrewsbury's plans for its future are being coordinated. Programs or initiatives that further the purposes of the plan could include such projects as the development of advisory commissions which would address issues like affordable housing and historic preservation, the development of tax stabilization contracts which would allow the town to promote the growth of specific types of businesses or the municipal purchase of development rights which could preserve undeveloped lands.

The following list of maps in the Appendix, together with those maps noted below that are on file in the Shrewsbury Town Clerk's Office, are made part of this Plan and incorporated herein by reference. It should be noted that these maps exist only as a general representation of existing conditions, to facilitate on-site analysis and the planning process.

List of Maps in Appendix:
1. Shrewsbury, VT Municipal Map
2. Future Land Use
3. Natural Resources, Shrewsbury, Map 1 of 2
4. Natural Resources, Shrewsbury, Map 2 of 2
5. Shrewsbury, VT Contours
6. Shrewsbury, VT Aerial Photograph
7. Shrewsbury, VT Watersheds
8. Flood Plan map.

Additional Maps to be on File at Town Office:
1. Flood Plan map
2. Official Highway map
3. Parcel map (available in hard copy and electronically)

3. OBJECTIVES

It is the purpose of this Plan to guide future growth and development within the Town of Shrewsbury by providing a framework of planning policies and recommendations which will assure that decisions made at the local, regional, and state levels are consistent with the following objectives:

3.1 To protect and preserve the rural nature, scenic quality and sense of community of Shrewsbury;

3.2 To protect public health and welfare and property values from air, noise, water and light pollution, and other disturbing physical influences;

3.3 To assure that basic needs of health, safety, education, housing and recreation will be met and maintained at appropriate levels in accordance with the Town Plan;
3.4 To provide for the conservation and prudent use of natural resources, the protection of fragile areas, and the preservation of agricultural land, forest land and wild lands. Wild lands are unsettled, uncultivated land left in or returning to its natural condition.

3.5 To protect and preserve scenic and historic features;

3.6 To maintain and encourage agriculture and forestry as a part of our Town;

3.7 To require that public utilities be located and maintained in such a way that they will not have an adverse effect on the scenic quality, biological and general health, and land use in the Town;

3.8 To mitigate any incompatible or uncoordinated development activity;

3.9 To allow for future growth in a way that will meet the needs but will not place an undue burden, financial or otherwise, on the Town to provide community facilities and services;

3.10 To encourage that the Town and State roads permit safe travel within and through the Town in the least disruptive manner to the land and within the limits of Town financial resources and the State Scenic Road Act;

3.11 To protect aquatic and upland ecosystems, critical animal habitats and corridors, and wild areas;

3.12 To encourage energy efficiency, energy conservation and non-polluting renewable energy production.

4. LAND USE PLAN

4.1. Natural Factors

4.1.1. Geology

Bedrock Geology of the Shrewsbury, VT Area, by Charles A. Ratte, State Geologist.

The bedrock underlying the Town of Shrewsbury is composed of ancient metamorphic rocks of Precambrian Age (600 million years and older.) The region has been mapped by William F. Brace (1953) and the results of his work have been published by the Vermont Geological Survey (see reference below).

The rock units mapped by Brace (1953) include the Wilcox Formation which is composed of a group of gray-to-black schist, buff-to-tan-colored dolomite and white-to-black gneiss about 3000 feet thick. This formation is exposed in out-croppings in the western part of the Town of Mendon and Shrewsbury and can be seen in exposure along Mendon Brook, Cold River and on Wilcox Hill. The major Precambrian rock unit mapped by Brace (1953) is known as the Mt. Holly Complex. This unit is composed of metamorphic rocks known as gneiss, quartzite, schist, and marble. Gneiss is by far the dominant rock variety. An interesting bright green Schist with chromium-bearing mica is exposed in a small saddle on the north side of Round Hill in Shrewsbury (Brace, p. 27).

4.2.3 Economic Base

Timber, agricultural land, some mineral sources, and sand/gravel deposits are still a part of Shrewsbury's economic base, but the greatest resource we have is our land and its rural and scenic nature. This special land resource contributes to the local economy and that of the Region and State where tourism and recreation are the leading industries. The Town's challenge is to keep Shrewsbury predominantly rural. Small-scale agriculture and local home or "cottage" industries offer economic opportunities for Shrewsbury residents while reinforcing the basic rural economy of the Town. In recent years there has been an increase in local vegetable and fruit production with Community Supported Agriculture (CSAs), farmer's markets, roadside markets and local food coops selling local produce. Spring Lake Ranch, one of the oldest half-way houses in the United States, is the Town's largest employer.

4.3 Prospective Land Use

4.3.1 Development Constraints

An analysis of natural factors influencing prospective land use has identified certain elements that have historically placed critical constraints on development and will continue to do so in the future. The constraints imposed by some of these elements are described below with policies for prospective land use.

4.3.1.1 Shallow Soils

Much of Shrewsbury has shallow depth to bedrock. Shallow soils present design constraints during the construction of roads, the clearing, paving and re-grading of land, as well as the location, planning and construction of homes and sewage treatment systems. Proper installation of these systems is necessary to prevent contamination of groundwater, seepage to the surface, or freezing of sewer and water lines. Once the vegetation is disturbed during construction, the soil cover is highly susceptible to erosion.

POLICY 1 - Shallow Soils

1. Septic systems shall be designed and installed in accordance with the State of Vermont Wastewater System and Potable Water Supply rules.

2. Septic regulations shall address the constraints that shallow soils present to septic system design.

3. Erosion control measures must be implemented on all sites.

4.3.1.2 Steep Slopes

Development on slopes in excess of 15 percent without proper precautions may threaten the stability of the property being developed and the quality of the surrounding property. On-site sewage disposal hazards, soil erosion due to increased rates of runoff and landslides not only jeopardize the development in question, but are also a threat to the water supplies and properties of down-slope owners. Consequently, slopes steeper than 15% present extreme difficulty in complying with the Vermont Health Regulations governing subdivisions.

POLICY 2 - Steep Slopes

1. State guidelines shall be followed for preventing soil erosion at construction sites. On lots where a substantial portion of developed area exceeds a slope of 15%, an erosion control plan shall be required.

2. Any development on slopes over 15% may be allowed only if it can be demonstrated by the owner that development and subsurface disposal of sewage will meet the appropriate state and local regulations, will not endanger any other water source, and will not cause erosion.

3. It is the policy of the Town to prohibit all development on slopes of 20% or greater.

4.3.1.3 High Water Table

Areas with a seasonal or year-round high water table close to the ground surface place very critical constraints on settlement. Use of subsurface sewage disposal in these areas can result in pollution of surface and ground water due to lack of sufficient unsaturated soil for adequate treatment of sewage. Cellars are frequently filled by excessive seepage of water.

POLICY 3 - High Water Table

1. All septic systems shall meet Agency of Natural Resources waste water and water supply rules to avoid contamination of groundwater.

4.3.1.4 Flood Plains

Flood plains pose inherent hazards to human life, health, and property. The major flood plains in Shrewsbury as designated by State and Federal mapping are along the Mill River and along the Cold River. The 100-year flood frequency is used as the standard for delineating flood hazard areas by the Federal Emergency Management Agency (FEMA).

An important function of floodplains is the storage and conveyance of flood waters. New development and the associated fill placed in a floodplain can obstruct flood flows and

reduce the ability of the floodplain to store water, which can subsequently cause floodwaters to rise to higher levels on upstream and adjacent properties.

The National Flood Disaster Protection Act of 1973 requires: (1) the Town to regulate development in designated flood hazard areas, and (2) that property owners in flood plain areas purchase flood insurance. If the community or property owners fail to meet the National Flood Insurance Program (NFIP) requirements, then any federal and federally related financial assistance for buildings in the flood plain will be unavailable to either the community or property owner.

The vast majority of flood damage suffered in Vermont is caused by fluvial erosion, not inundation. Without the expertise and tools to manage fluvial erosion hazards, towns have been helpless to break out of this cycle of repetitive and costly flood damages. On August 28, 2011, much of Vermont was dramatically affected by Tropical Storm Irene. This storm delivered upwards of 6" of rain, causing streams and rivers to overflow their banks, damaging and destroying roads, culverts, bridges, homes and businesses. The storm exceeded the 100 year flood level.

POLICY 4 - Flood Plain

1. Shrewsbury shall maintain Flood Hazard Area Regulations to mitigate flood hazards and fluvial erosion.

2. Development in the Flood Plain shall comply with the Shrewsbury Flood Hazard Regulations.

3. Shrewsbury should take steps to reduce future hazards from occurring by adopting a Fluvial Erosion Hazard Zone overlay district. The zone would be scientifically defined based on the stream geomorphic assessment (SGA) data and would reflect the area needed for the stream to behave in a natural manner, with corridor planning and management.

4.3.2 Fragile Areas and Natural Areas (See maps)

Fragile and Natural Areas are rare or irreplaceable natural resources. These areas may have significant or unique value for biological habitat, scientific research, educational, aesthetic or recreational purposes, or may simply be an area especially valued by Townspeople. Because these areas contribute to maintaining the environmental health and quality of the Town, such areas require special conservation and protective measures.

4.3.2.1 Elevations Above 2000 Feet (See Fragile Areas map)

As part of the Green Mountain Range, the land in Shrewsbury rises to relatively high elevations, with Shrewsbury Peak being one of Vermont's highest peaks at 3720 feet above sea level. On high elevations, generally above 2000 feet, precipitation is greater, air and soil temperatures are lower, soils are shallow and low in nutrients, slopes are

steep, and fewer varieties of plants exist. Such characteristics create an environment which is intolerant of intensive use or development.

Excessive erosion may result when these high-elevation areas are disturbed because the few natural species of plants at these altitudes grow quite slowly, thus reducing their ability to control erosion.

These high mountain areas play a vital role in the water cycle. The greater amounts of precipitation filter through the thin soils, eventually reaching major groundwater supplies. Uses which result in excessive soil compaction or the removal of vegetation or soil cover are especially detrimental to the natural drainage of water. Also, the natural topography of Shrewsbury is such that the high elevation peaks and ridgelines that bound Shrewsbury's watersheds on the north lie not within Shrewsbury, but in the neighboring town of Mendon. While beyond the direct control of Shrewsbury's Town Plan or Zoning Ordinance, settlement or development on these adjacent lands may directly and adversely affect the Town of Shrewsbury, the health, safety and welfare of the Town's residents and the aesthetic and scenic resources of the Town.

POLICY 5- Elevations Above 2,000 Feet

1. Elevations above 2000 feet shall be protected with respect to intensive uses and commercial recreation. The Shrewsbury zoning bylaws shall require a site review procedure for development at elevations between 2000 and 2300 feet in order to assure that any development in these zones will not adversely affect the fragile ecosystems and scenic quality of the terrain. No development of any kind shall be allowed over 2300 feet.

2. The Town of Shrewsbury should work closely with other municipalities in the region in planning and reviewing development along the Town's boundaries. This would include participation in Act 250 and Section 248 hearings, in local zoning proceedings and in regional discussions as appropriate to achieve these goals and to safeguard Shrewsbury's interests.

4.3.2.2 Wetlands (see Fragile Areas map.)

Wetlands in Shrewsbury are extensive, including but not limited to: Fletcher Swamp, Johnson & Cook's Ponds, Hebert Swamp, Elliot House Beaver Pond, and Black Swamp. These areas fulfill many important functions. Because of their high water-absorptive and holding capacity, they serve to retain runoff, thereby reducing the hazards of flooding and providing an important link in replenishing groundwater supplies. These areas are commonly known as ponds, bogs, fens, marshes, wet meadows, shrub swamps, and wooded swamps. Wetlands often occur in association with lakes, ponds, rivers, and streams, creating transitional areas between dry land and open water. Wetlands are the source of major food chains, thus providing a unique habitat for a wide range of wildlife. Many recreational and educational opportunities such as hunting, fishing, hiking, bird watching and nature study are provided by these areas. The Town’s zoning regulations require that any proposal for development or agricultural use should be set back by at least 100 feet from Wetlands. The Vermont Use Value Appraisal (UVA) program now recognizes riparian areas as one of six designated Environmentally Significant

Treatment Areas which can be designated on qualifying UVA parcels, adding another level of protection to water resources in Shrewsbury.

POLICY 6-Wetlands

1. Wetlands will be protected from encroaching development, including roads and driveways, and disturbances harmful to wetland-dependent wildlife by restricting development and specific activities in wetlands and by maintaining and/or establishing undisturbed, naturally vegetated buffers around their edges. Wetlands in the State of Vermont are classified as class I, II, or III and are regulated by the State of Vermont and the Army Corps of Engineers.

2. The Town's zoning regulations shall require that any development or agricultural use be set back by an appropriate distance from the wetlands.

4.3.2.3 Water Resources, Shorelines, and Stream Banks

Shorelines and stream banks are fragile areas. Certain species of wildlife are greatly dependent upon the particular habitat of these areas. Vegetation along the water's edge acts as a stabilizing force, helping to prevent erosion and siltation and providing shade to water. All surface waters are under state jurisdiction. Building too close to shorelines negatively impacts stream ecosystems. Effluent leaching from septic systems placed too close to the water's edge can pollute ground and surface water. Moreover, development in neighboring towns could adversely affect headwater streams and aquifer recharge areas within Shrewsbury's boundaries.

POLICY 7 - Water Resources, Shorelines, and Stream Banks

1. Shorelines and stream banks shall be protected from uses that may reasonably be expected to cause erosion, increase water temperature, and reduce scenic qualities of surface waters or cause pollution. Any development endangering the natural quality of shorelines and stream banks shall be prohibited. Water Resources shall be managed as necessary to include eradication and preventative control measures against invasive plants and pests that threaten our water resources, shorelines, and stream banks. More information for landowners can be found at www.vtinvasives.com or by speaking with the USDA Natural Resource Conservation Service.

2. Water resources should be managed as necessary to control and eliminate invasive plants and pests that threaten our water resources, shorelines, and stream banks.

3. An appropriate buffer zone shall be established and maintained for protection of streams, ponds, and lakes. No work shall be done that degrades a currently vegetative buffer zone along a stream bank. The Vermont Use Value Appraisal (UVA) program now recognizes riparian areas as one of six designated Environmentally Significant Treatment Areas which can be designated on qualifying UVA parcels, adding another level of protection to water resources in Shrewsbury.

4. It is Town policy that no development, agricultural or forestry practice in Shrewsbury shall degrade or otherwise adversely affect the water resources of the Town.

5. Watersheds shall continue to function as biologic units. Habitat and forests shall be interconnected and not fragmented.

6. It is Town policy to encourage owners and residents to work with the Planning Commission to prepare specific land use and development plans for their watershed. Once the owners and residents and the Planning Commission are satisfied that the plan for their watershed meets the policies of the adopted Town Plan, the watershed plan can be reviewed and approved by the Town for inclusion in the official land use regulations and plan.

4.3.2.4 Aquifer Recharge Areas

The quantity and quality of the Town's ground water supply is directly related to the type and intensity of uses that occur in areas of high aquifer recharge. Settlement can greatly reduce these areas of recharge and also increase surface runoff, thus decreasing infiltration of surface water. Also, the quality of groundwater may be threatened through numerous subsurface sewage disposal systems. Because a potable water supply of sufficient quantity is of critical necessity to life itself, these fragile recharge areas require protection.

POLICY 8 - Aquifer Recharge Areas

1. Aquifer recharge areas shall be permanently protected from uses and development that would significantly reduce their permeability or endanger the quality and/or quantity of groundwater supplies.

2. The location of soils that allow water to penetrate into the ground to form the ground water supply for Shrewsbury should be identified and shown on maps.

4.3.2.5 Critical Wildlife Habitat

Critical wildlife habitats are those areas that are necessary for the survival of a wildlife species at any period of its existence. The wetlands areas within the Town fulfill this function for many species. Habitats such as the Black Swamp, Fletcher Swamp, Spring Lake, and the area around Johnson Pond and Cooks Pond provide excellent cover and food. The remote, heavily wooded, rugged, and unpopulated sections of Shrewsbury including the Calvin Coolidge State Forest, the Plymsbury Wildlife Management Area, and Parker's Gore, the wildlife corridor in Mendon, also provide valuable wildlife habitat. In fact, our Town contains excellent habitats for bear, deer, bobcat, furbearers, moose, turkey, snowshoe hare and other animals, which require large contiguous tracts of land for survival. In addition, the several lands in trust, or lands on which development rights have been sold or donated, offer a future guarantee for wildlife habitat's existence. The Vermont Use Value Appraisal (UVA) program (current use) now recognizes critical wildlife habitat as one of six Environmentally Significant Treatment Areas for which landowners can designate portions of their UVA-qualifying lands.

Preservation of den trees and a good distribution of trees in various age classes over the entire area are critical to preserving a variety of wildlife species. The potential development of wild places in neighboring towns can eliminate essential habitat and corridors for many wildlife species, it is necessary that Shrewsbury protect its critical habitats if the Town wishes to enjoy the presence of a variety of wildlife, and to ensure continued biodiversity.

POLICY 9 - Critical Wildlife Habitat

1. Critical wildlife habitat and corridors (including, but not limited to, den trees and bear corridors, wetlands, deer yards, surface waters, streams) shall be protected from uses and settlement that reduce their vital biological function.

2. The Town should request that the existing Conservation Commission, in consultation with the Vermont Department of Fish and Wildlife, identify important wildlife habitat and to propose measures to improve habitat and to assure a healthy and diverse wildlife population in the Town.

3. Landowners are encouraged to include forest management practices that will benefit wildlife in their Use Value forest management plans; to work with land trusts and non-profit organizations to protect critical wildlife habitat; and, if they wish, to apply for financial assistance in enhancing wildlife habitat (such as from the USDA Natural Resource Conservation Service).

4.3.2.6 Unique Geologic Areas

Unique geologic areas are uncommon formations which illustrate the past actions of natural geologic processes. As such, they have important educational and recreational value. Shrewsbury Peak, the Clarendon Gorge, Granite Hill, the Molybdinite Prospect west of Cuttingsville, and the Round Hill Fuschsite Locality are some of these areas in Shrewsbury.

POLICY 10 - Unique Geologic Areas

1. Unique geologic areas shall be protected from any uses which would destroy or impair their scientific or non-commercial recreational value.

4.3.3 Resource Areas

4.3.3.1 Agricultural Lands

There are approximately 3,500 acres of prime, statewide important, and locally important agricultural land in Shrewsbury, of which approximately 774 acres are of prime agricultural soil. These lands represent the soils mapped by the USDA and Vermont

Agency of Agriculture for soils that are suited for growing and agricultural potential. At one time, the Town of Shrewsbury was primarily an agrarian community, producing sheep, wool, and maple, and dairy products. Only one commercial dairy farm remains, but the following have been, and will continue to be, viable:

* commercial and personal vegetable gardening including CSA farming
* sheep and goat-raising for wool, fleece, milk, cheese and meat
* small/micro dairy farming for raw milk production
* beef cattle
* maple sugaring
* Christmas trees, ornamental, shade and fruit stock
* fruits, such as apples, blueberries, raspberries and strawberries
* herbs, fresh and dried flowers, specialty crops

If maintained and encouraged, agricultural land use will continue to have a tremendous positive effect on the visual appeal and value of Shrewsbury's landscape and the productivity of our community. After 200 years of cultivation, the meadows cleared by the first settlers are reverting to forest or are being used for housing sites. Shrewsbury residents are truly interested in preserving the traditional rural character and scenic value of the Town; therefore, we commit to preserving the remaining agricultural land and to assuring that farming remains a viable economic enterprise in Shrewsbury.

Whatever we do in Shrewsbury, we do it on soil. The more the requirements of our land uses match the properties of the underlying soils, the more we are likely to have a productive, healthy, and vigorous community now and in the future.

Residential, commercial or industrial development of agricultural lands provides at best a shortsighted benefit. Loss of productive land may reduce our long-term ability to support our population. Conversion to non-agricultural use increases costs to the community and diminishes our capacity for agricultural production. Fragmentation of lands reduces their agricultural and natural heritage value.

The State of Vermont has developed Accepted Agricultural Practices which are a base level of management for all farms in Vermont. These management practices are designed to reduce non-point source pollution to surface waters from agricultural activities. Implementation of Accepted Agricultural Practices by Vermont agricultural operators creates a rebuttable presumption of compliance with Vermont Water Quality Standards and the Vermont Wetland Rules.

POLICY 11—Agricultural Lands

1. Agricultural soils are a critical resource and quality agricultural soils should be protected. The use of these soils for appropriate scale agricultural development is encouraged. Other development should be concentrated primarily on those soils low in potential agricultural value. Agricultural land shall be managed as necessary to include eradication and preventative control measures against invasive plants and pests.

2. Agricultural land should be managed as necessary to control and eliminate invasive plants and pests.

3. Agricultural uses of the Town's agricultural resource land (Prime agricultural, Statewide, and locally important soils as derived from the USDA Natural Resource Conservation Service map) will be encouraged. Lands identified as agricultural lands on the SCS soils map are those lands having important agricultural resource value regardless of whether or not these lands are now in agricultural use. These lands shall be protected so that their full potential for farming may be preserved, whether it is realized at the present time or at some future time.

4. Settlement on and/or non-agricultural development on Prime agricultural land should be discouraged. Settlement on Statewide or locally important soils should occur only in locations, patterns, and densities that will not substantially reduce the area or the productivity of these lands.

5. The Town shall consider a variety of techniques to maintain the agricultural productivity of prime, state, and locally important agricultural soils, including:

- Tax stabilization and incentives,
- Agricultural protection districts,
- Purchase/transfer-of-development-rights programs,
- Assistance programs,
- Town agricultural land revolving fund,
- Assessment of farm and forest land at its use value,
- Easements,
- Planned Unit Development (PUD): A PUD is a mixed use development (residential, commercial and/or industrial) that often uses clustering of structures to preserve open spaces and allows flexibility to encourage new communities, innovation in design and layout, and more efficient use of land, to facilitate the adequate and economical provision of streets and utilities, and to preserve the natural and scenic qualities of the open lands of this state,
- Open Space Development (OSD): Similar to Planned Unit Development (PUD), Open Space Development (OSD) recognizes the value of the open space and allows flexible lot development while protecting the open space,
- Other flexible planning strategies designed to preserve agricultural land,
- Land Trusts: A land trust is a tax-exempt, charitable organization working with landowners to facilitate land conservation and open space protection; i.e., purchase development rights, donation of development rights, land gifts, and community projects to protect public land.

6. The Town, through its Planning Commission, should develop a plan for farmland preservation and propose specific incentives to implement a farmland conservation program. As part of the program, the Conservation Commission or others should offer voluntary assistance to land owners to help them preserve farm and pasture land for continued agricultural use. Fragmentation of agricultural land shall be discouraged.

7. The Town should encourage farmers and landowners to take advantage of existing State and Federal programs assisting the development and operation of viable agricultural operations.

4.3.3.2 Woodlands

The Town's woodlands are an important resource for aquifer recharge, plant and wildlife habitat, and recreation, as well as timber production. Properly managed woodlands provide income and employment for some Town residents, as well as recreation, wildlife habitat, and aesthetic benefits to the general public. If the Town is to promote the sustained productivity of its private woodlands for the benefits they provide, it should encourage sound forest management practices and should provide incentives for improvement of these private woodlands. The Town must have both unmanaged and properly managed woodland in order to support health and biodiversity.

In cooperation with the County Forester, the Town should seek to educate eligible woodland owners about available forestry assistance programs. Through distribution and display of printed information, the Town should encourage woodland owners to take advantage of existing State and Federal programs such as the Use Value Program (tax advantages for proper forest management), the Rural Forestry Assistance Program (free forestry advice on woodland management), and Federal Cost-Share Programs (partial funding of costs of forest treatment). In cooperation with owners of well-managed woodlands, the Town could designate demonstration woodlots for educational purposes. Because the Town contains a large quantity of public forest land, Shrewsbury is directly affected by the management practices and uses on these lands. Along with other benefits, the portions of the Coolidge State Forest lying within the Town act as a critical buffer zone to protect Shrewsbury from expanding commercial recreation and residential development in adjacent towns. As development infringes upon the surrounding wild places in Mendon, Killington, Bridgewater and Plymouth, the remaining acreage of the Coolidge State Forest will become increasingly important to the region as a whole for its plant and wildlife habitat, aesthetic qualities, wild lands, and non-commercial recreation possibilities.

It is important to the Town that all public lands within its boundaries be protected and/or managed according to the highest standards of stewardship. Use of these lands should be consistent with a comprehensive long-range management plan that is adopted by the responsible State or Federal agency after reasonable opportunity for comment and input by the Planning Commission, the Select Board, and interested residents.

In cooperation with the Department of Forests, Parks, and Recreation, the Town shall seek to designate contiguous portions of the public woodlands as a Forest Preserve in order to maintain a viable expanse of public and private lands in natural, unfragmented, or unmanaged forest conditions.

Shrewsbury landowners with woodlands utilizing the Vermont Use Value Appraisal (UVA) program can now also designate portions of their qualifying parcel to manage portions of the land for six recognized Environmentally Significant Treatment Areas (ESTA's). The six recognized areas include: Natural Communities of Statewide Significance, Rare Threatened, and Endangered Species, Vernal Pools with Amphibian Breeding Habitat, Forested Wetlands, and Old Forests. These recognized ESTA's allow landowners to manage portions of their parcels with these resources without prescribing timber management, but rather resource management for the protection of the identified ESTA or resource.

Accepted Management Practices for Maintaining Water Quality on Logging Jobs in Vermont (AMPs) were developed to implement *Title 10 V.S.A. Chapter 47: Water Pollution Control* The AMPs are intended and designed to prevent any mud, petroleum products and woody debris (logging slash) from entering the waters of the state and degrading water quality.

POLICY 12 – Woodlands

1. Development on productive forestland shall be concentrated in a pattern and density that does not substantially reduce the contiguous acreage available for sustained biodiversity and woodland productivity.

2. The Town should promote conservation and management of private woodlands by educating landowners about optimum forestry practices and available State forest management programs. The Town should request that the Conservation Commission, in consultation with the Vermont Fish and Wildlife Department; Vermont Department of Forests, Parks and Recreation; and non-profit organizations educate landowners about the opportunity to include designation of Environmentally Sensitive Treatment Areas (ESTA's) in their Use Value forest management plans.

3. The Town should request that the Conservation Commission, in consultation with the Vermont Fish and Wildlife Department; Vermont Department of Forests, Parks and Recreation; and non-profit organizations educate landowners about the opportunity to include designation of Environmentally Sensitive Treatment Areas (ESTA's) in their Use Value forest management plans.

4. The Town should consider a variety of techniques to conserve undeveloped woodland, including:

- Tax stabilization and incentives,
- Forestry protection districts,
- Purchase/transfer-of-development-rights programs,
- Assistance programs,
- Town forest land revolving fund,
- Assessment of farm and forest land at its use value,
- Easements,
- Planned Unit Development (PUD): A PUD is a mixed use development (residential, commercial and/or industrial) that often uses clustering of structures to preserve open spaces and allows flexibility to encourage new communities, innovation in design and layout, and more efficient use of land, to facilitate the adequate and economical provision of streets and utilities, and to preserve the natural and scenic qualities of the open lands of this state,

  Open Space Development (OSD): Similar to Planned Unit Development (PUD), Open Space Development (OSD) recognizes the value of the open space and allows flexible lot development while protecting the open space,
- Other flexible planning strategies designed to preserve forest land,
- Land Trusts: A land trust is a tax-exempt, charitable organization working with landowners to facilitate land conservation and open space protection; i.e., purchase development rights, donation of development rights, land gifts, and community projects to protect public land.

5. Woodlands should be managed according to sound, environmentally acceptable forestry practices, such as the preparation of formal forest management plans. Plans for clear cuts over two acres shall minimize the impact on wildlife habitat, erosion, sound buffers, lighting shields, and views from neighboring and distant properties. Woodlands should be managed as necessary to control and eliminate invasive plants and pests.

6. Use of State lands shall be consistent with a comprehensive long-range management plan prepared in cooperation with appropriate State agencies and Town officials and in compliance with the Town Plan.
7. The long-term objective for private and public forest lands in Shrewsbury should be the sustainable use of these lands, with consideration given to plant and animal wildlife, watersheds, timber and recreation. Harvest practices should be consistent with the same.

8. The Town shall seek to designate an area (or some areas) to be set aside as a Natural Forest Preserve, an unmanaged area for education, biodiversity, and sustainability.

9. State and Federal lands in the Town shall not be sold, leased, or deeded to any person or organization for any form of development without prior consultation with the Town. Where appropriate, the Town will adopt regulations to control subsequent use by the new owner or lessee.

4.3.3.3 Sky and Atmospheric Resources

The relative darkness of Shrewsbury's night sky is an increasingly unique resource which provides residents the opportunity to enjoy natural darkness and clear views of the stars above. Large population centers tend to emit a night-time glow that obliterates the visibility of stars and other heavenly bodies. This is directly due to high levels of outdoor lighting of a powerful and indiscriminate nature. In addition, residential and public lighting fixtures in Shrewsbury can create excessive and costly over-illumination and be hazardous when poorly positioned.

The following are typical problems incurred with outdoor lighting:
a) sky glow -- light shines upward into the sky where it serves no useful purpose; sky glow also limits the visibility of the stars in the night sky;
b) glare -- occurs when you can see light directly from the fixture, or bulb; glare creates a hazard rather than increasing safety because it hampers the vision of pedestrians, cyclists and drivers;
c) intrusive light -- poor outdoor lighting shines off the owner's property;
d) energy waste -- lighting which is stronger than necessary for its intended purpose and/or is poorly directed.

In addition, any expansion of the Southern Vermont Regional Airport could have a negative impact on our air space with increased aviation traffic, noise and air pollution. The development in Rutland Town along Route 7 has created an impact on the night sky in Shrewsbury. Expansion of this type of development without regard to responsible lighting policies is discouraged.

4.3.4.3 Rural Areas

The preservation of Shrewsbury's rural and agricultural nature and the maintenance of the viewscapes that give the Town its charm are threatened, both by the pressure of large-scale development, and by the gradual “parcelization” and subsequent development of the Town as a consequence of many individual and well-intended development decisions.

The charm of the New England landscape resides in the juxtaposition of clustered homes in a village setting with outlying farms and wooded areas. The danger where residential development pressure is significant, as it is in Shrewsbury, is that the important components of a working and natural landscape may be consumed by development that could be more appropriately sited in other locations. The Town seeks a rural rather than a suburban pattern of residential land use.

An approach to maintaining and promoting the Rural Residential Landscape might be found in one or more of the following techniques:
• clustering development
• transfer of development rights
• use of planned residential and unit development
• conservation easements
• incentives to promote development in villages
• incentives to keep land in production
• combined driveways
• Vermont current use program
• protection of undeveloped areas.

POLICY 18 - Rural Areas

1. The retention of the Town's scenic and rural character is a primary goal. The density and location of rural settlement shall be guided by the policies set forth in this Plan and by the provisions of the Shrewsbury zoning bylaws and subdivision ordinance.

2. To assist landowners in complying with the objectives and policies of this Plan, the Town may consider setting up a voluntary "Site Assistance Program." This program would be carried out by a committee of Townspeople with skills in engineering, architecture, forestry, agriculture, and landscaping. The committee would advise landowners on ways to carry out planned development and construction so as to preserve agricultural and forest productivity, and to protect the scenic quality of the Town.

4.3.4.4 Conservation Areas

Conservation areas consist of all land subject to settlement constraints as defined in Section 4.3.1. These areas are based on the Natural Resources maps and include land subject to one or more of the following characteristics:
(1) Shallow soils;

(2) Slopes 15% and greater and less than 20%;
(3) High water table;
(4) Flood plains;
(5) Meadowlands;
(6) Deer yards;
(7) Wildlife corridor;
(8) Bear production habitat;
(9) High elevation (2,000' and 2,300')

POLICY 19 - Conservation Areas

1. In conservation areas, settlement may be permitted, but only with conditions related to the physical limitations present and with regard to the densities and locations recommended in the zoning bylaws.

2. Because the very criterion for Protection Areas is their uniqueness, any development will have to meet the guidelines expressed in Sections 4.3.1 and 4.3.2.

4.3.4.5 Protection Areas

Protection areas are those areas designated on the Natural Resources maps. They are identified by their locally significant or irreplaceable qualities. These areas are considered generally not suitable for development.

Protected areas include:
(1) Ridgelines
(2) Slopes greater than 20%
(3) High elevation (more than 2,300 feet)
(4) Surface waters and wetlands

POLICY 20 - Protection Areas

1. Because the very criterion for Protection Areas is their uniqueness, any development will have to meet the guidelines expressed in Sections 4.3.1 and 4.3.2. The designation of Protection Areas shall continue to be a provision of permanent zoning regulations.

4.3.4.6 Residential Development and Acreage Requirements

Shrewsbury has used the technique of minimum lot size requirements to ensure that the intensity of development is appropriate to the different areas of the Town. While the goal of minimum lot size designation is understandable, the limitations and drawbacks are increasingly evident:

* Lot size has nothing to do with the protection of rural and scenic qualities. In some parts of Shrewsbury, even land parceled into large lots is inappropriate for the area, while in village centers, the smallest lots now utilized may be too large to retain compact settlement.

enhance the appearance of all roadsides, such as Green-up Days and restoration of stone walls.

2. Town roadways should be managed as necessary to control and eliminate invasive plants and pests.

5.1.2.7 Surface Waters and Wetlands

Rivers, streams, ponds, lakes, and wetlands are all of high scenic, recreational and wildlife value. Activities in a watershed can affect the quality of the waters downstream.

POLICY 32 - LANDSCAPE PATTERN: Surface Waters and Wetlands

1. Surface water (streams, lakes, and ponds) and wetlands shall be protected from settlement and uses which would reduce their water quality and/or wildlife habitat, or despoil the scenic quality of their banks and shorelines.

5.1.2.8 Utility Lines and Corridors

There are a number of utility lines and corridors within the Town. These include the railway corridor, a major electric transmission line corridor owned by Vermont Electric Power Company, and a Green Mountain Power line cutting across the southwest corner of Town. The trend in construction and maintenance of distribution lines serving residential demand is to follow roadways, rather than travel cross lots as was the practice when farms represented the bulk of rural service. The Town discourages the use of herbicides in controlling the growth of vegetation in and around these utility lines and corridors.

POLICY 33 - LANDSCAPE PATTERN: Utility Lines and Corridors

1. It is the policy of the Town to discourage new electric transmission or gas line corridor or other new right-of-way nor any new transmission lines be constructed within the Town except within the aforementioned transmission corridor right-of-way that exists at the time of enactment of this Plan.

2. The existing corridors shall be maintained to minimize soil erosion, maximize wildlife habitat, and protect the scenic and aesthetic qualities of the landscape. The Town, being concerned about water quality, discourages the use of herbicides and recognizes the need to maintain vegetated buffer zone around surface waters. The Town will continue to work with the Railroad owner to minimize all the biological impacts of the maintenance on the railroad's right-of-way.

3. Before construction or reconstruction of lines or other changes in the existing corridors are permitted, the applicant shall furnish a bond sufficient to permit and require the completion of all screening and other landscaping required by the Town, Public Service Board or other Governmental body.

the complete and efficient utilization of all the Town's facilities to address various emergency situations.

POLICY 60-Emergency Management

1. Continue to develop and train an effective Emergency Management Team and volunteer program.

2. Anticipate emergency situations and pre-plan responses to them.

4. Hold training drills to effectively mitigate potential hazards.

3. Carefully assess responses to drills and actual situations and work to improve responses.

5. Identify and apply to funding sources for essential equipment—such as radios and generators.

6. Educate Shrewsbury citizens about Emergency Management and potential hazards through articles in the *Shrewsbury Times* and at local and regional workshops.

7. Keep Emergency Response plans up to date.

8. Actively participate in multi-town emergency preparedness activities while striving to be self-sufficient wherever possible.

9. Promote emergency safety among households in Shrewsbury.

10. ENERGY

The primary sources of energy in Shrewsbury currently are:
1) Wood, solar, oil, and propane for heating;
2) Green Mountain Power for electricity; and
3) Gasoline for transportation.

Of these, wood and solar are the only ones produced locally and sustainably. Wood is the only one whose price reflects local supply-and-demand factors. Although the other sources generally seem out of our control, there are choices we can make about where our energy comes from and how much of it we use.

10.1 Energy Production

There is a growing recognition of the importance of sustainable and environmentally sound energy production. Shrewsbury can and should do its part in the global transition from fossil fuels and nuclear power to alternatives such as clean wood burning, small-scale hydro, and solar and wind power generation compatible with the environmental

clustered to preserve the soils and allow for continued use of the land for agricultural purposes.

7. Shrewsbury encourages woodland owners to manage woodlots both environmentally and economically, and encourages forest products to be utilized in biomass production through accepted environmentally sound forestry and timber harvesting practices.

8. Removal of biomass for energy from Town woodlands and public forest land must require retention of adequate biomass residue from timber and sufficient woody debris to ensure long-term soil health and forest ecosystem sustainability.

9. Water energy conversion systems shall be sited appropriately and designed to be in full compliance with all Vermont laws and regulations. Hydro sites should also maintain and protect the environmental and biological integrity of our streams, brooks, and rivers.

10.2 Energy Transmission

Shrewsbury currently has two major electrical power transmission corridors. These have environmental and aesthetic impacts on the Town such as electromagnetic radiation, noise, wildlife corridor interruption, and the visual impact of clear-cut swaths across ridgelines and hillsides.

Utility lines inappropriately sited along our roadsides also have an aesthetic impact. The tree-trimming required to maintain them can significantly change the character of a road where branches arch overhead. The web of overhead lines in village centers limits the size of trees that can grow there. On-site energy production can potentially offset the impact of power line installation and maintenance tree trimming. The Town encourages the burying of utility lines when appropriate.

POLICY 63 - Energy Transmission

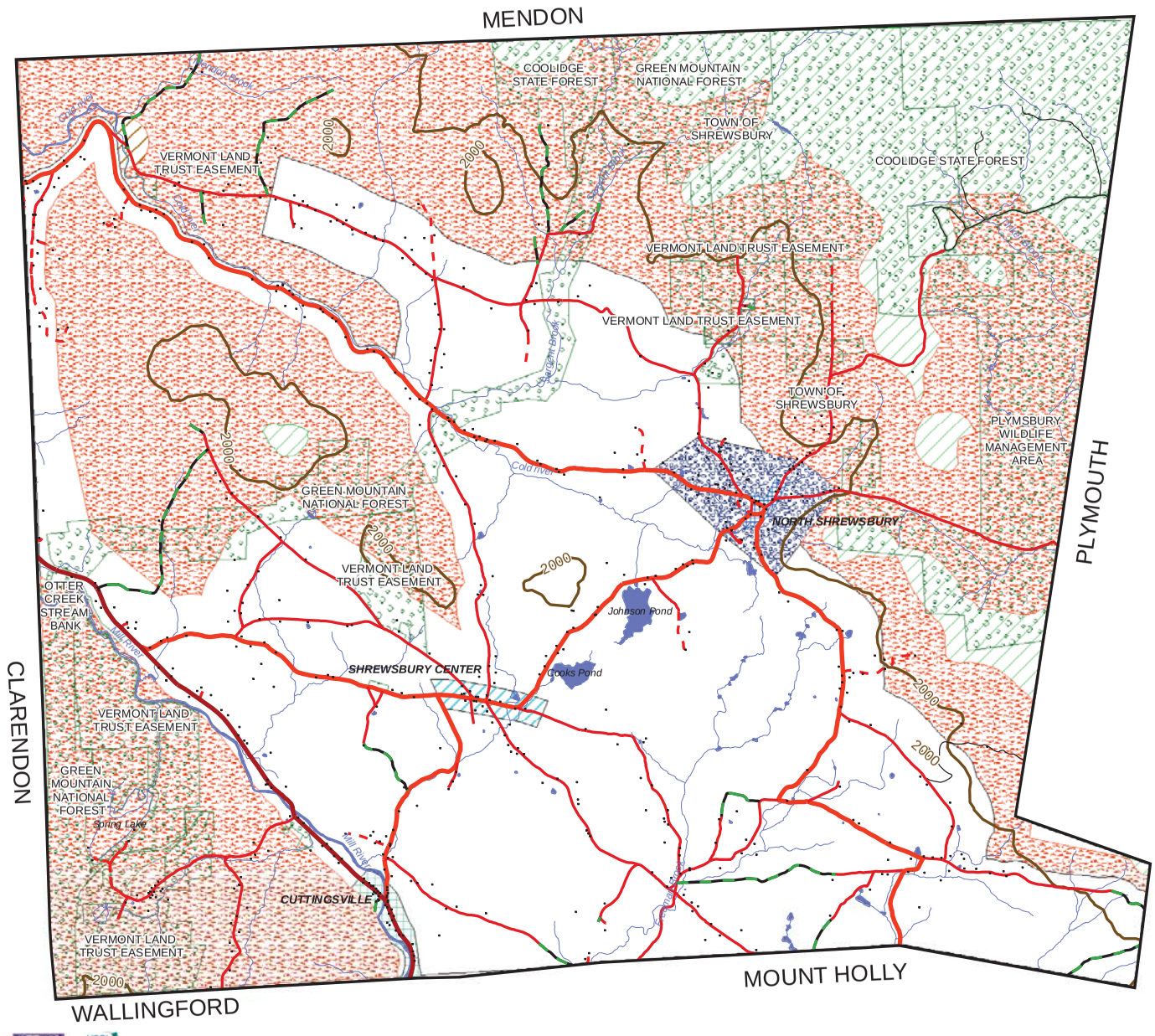
1. Utility line siting should take into consideration tree location.

2. Utility line tree maintenance shall be restricted to the minimum cutting possible.

3. Do not allow expansion of major energy (electric or gas) transmission outside of the two existing corridors, and require buffering of visual and environmental impacts of corridors.

4. The Town recommends the non-use of herbicides on all utility rights-of-way. We encourage the use of transmission corridors for pasture as an environmentally friendly way of keeping this land cleared.

5. Monitor the data on the danger of powerline transmission to populations of animals and people. Take action as required.



SHREWSBURY, VT
FUTURE LAND USE MAP
Map 2

Legend

- Structures
- Rivers and Streams
- 2000 Foot Contour Line
- VLT_RR_region_Mar08

LAND USE DISTRICTS

- North Shrewsbury/Northam
- Brown Covered Bridge Area
- Cuttingsville
- Shrewsbury Center
- Village Residential: North Shrewsbury
- High Elevation District
- Limited Res. (Min. Lot Size 10 Acres)
- Rural Res. (Min. Lot Size 4 Acres)
- Lakes, Ponds and Major Rivers
- Conserved Lands: Public and Private

N
W E
S

Shrewsbury Town Plan
Adopted November 20, 2013

Miles
0 0.25 0.5 1 1.5 2 2.5

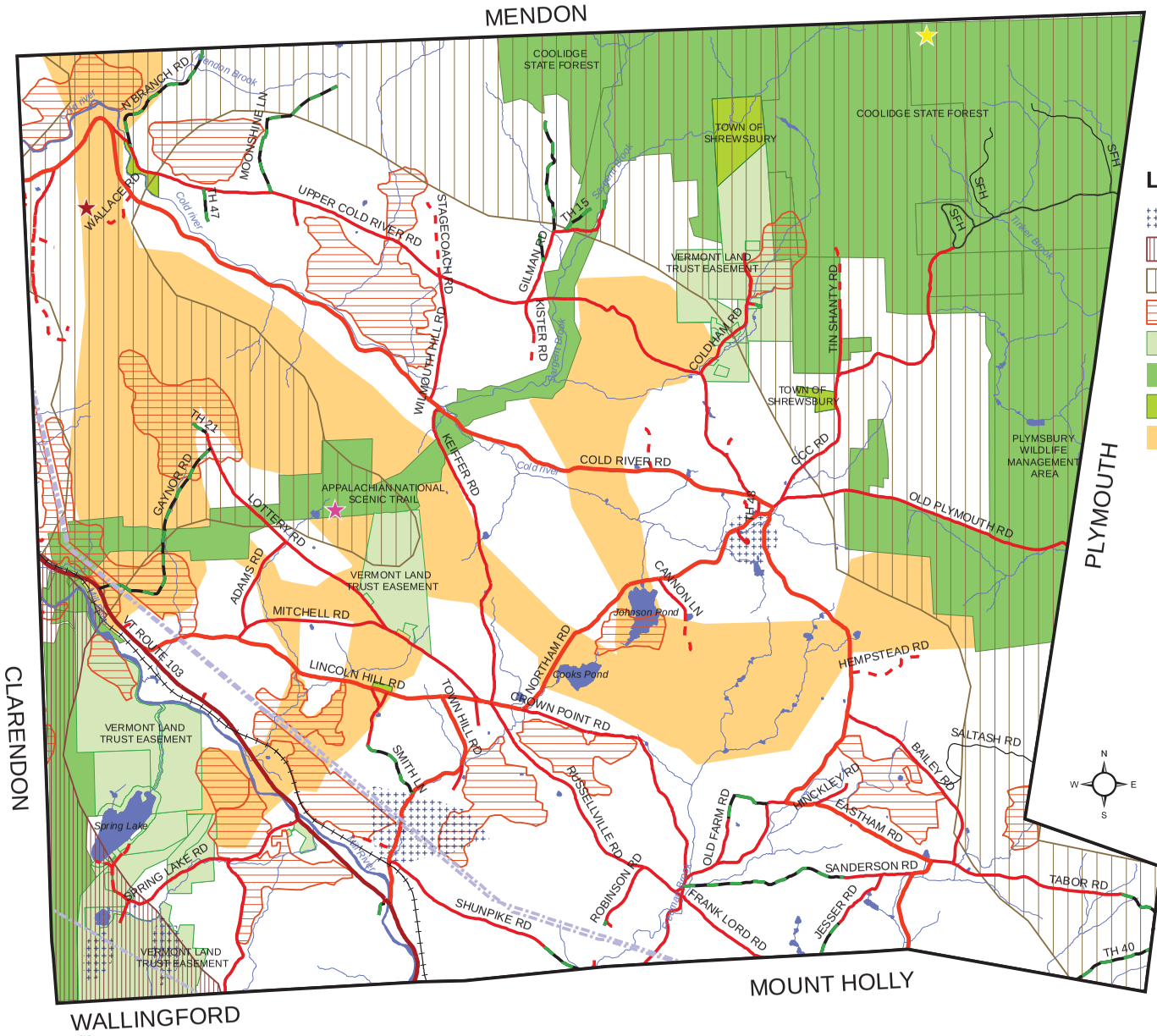
Road System

- Town Class One
- Town Class two
- Town class Three
- Town Class Four
- Private/ Unknown Roads
- US and State Highways

Date: 2/11/2014

Document Path: E:\RRPC\SHREWSBURY\planupdate maps 2013\TP 2008\FLU Map 2013.mxd

VCGI



SHREWSBURY, VT
Natural Resources II
Map 4

Legend

- Groundwater Protection Area
- Black Bear Seasonal Habitat
- Black Bear Production Habitat
- Deer Wintering Areas
- Private Conserved Lands
- Public Conserved Lands
- Town of Shrewsbury Conserved Lands
- Shrewsbury Wildlife Corridor

Rare, Threatened and Endangered Natural Communities

- Plant
- Animal
- Natural Community

Shrewsbury Town Plan
Adopted November 20, 2013

BLACK BEAR HABITAT: VT Fish and Wildlife Dept. Categories are based on a map titled; "Black Bear Habitat in Vermont, 1989".

DEER WINTERING AREAS: VCGI database EcologicHabitat_DEERWN, VT Fish and Wildlife Dept. (VFWD). From 2009 - 2010, the boundaries of deer winter areas where refined by VFWD district biologists using black and white leaf-off 1:5,000 scale orthophotography (1990-1999) and was cross referenced with 1:24,000 scale 2003 NAIP (color, leaf-on) imagery to better delineate fields and open wetlands.

PRIVATE CONSERVED LANDS: land in full or partial ownership by 501(c)3 conservation organizations (VLT, TNC, GMC, and others), a subset of the Vermont Conserved Lands database, 1999, 2009.

PUBLIC LANDS: VCGI database CadastralPublands_CONSPUB, 2009, a subset of the Vermont Conserved Lands database. It includes land owned by Municipal, State and Federal entities.

RARE PLANT/ANIMAL SITES: VCGI database EcologicOther_RTENATCOM, Rare, Threatened and Endangered Species & Significant Communities. For the Town of Shrewsbury, this includes: Palustrine and Terrestrial Natural Communities, Vascular and Nonvascular Plants, and Vertebrate Animals. For more information, refer to Vermont Nongame and Natural Heritage Program, VANR, 2013.

WELLHEAD PROTECTION AREAS: Source Protection Areas for groundwater sources (wells, springs), 1:24,000 USGS QUADRANGLES, VANR- DEC- Water Supply Division and VT Department of Health, 2011.

WILDLIFE CORRIDOR: VT Fish and Wildlife Dept.(VFWD), VTRANS, VT Biodiversity Project, 2012. Ratings are based on predictive models developed by VFWD and further enhanced by conversations and observations with and by local residents. Areas shown on the map have a Vermont wildlife suitability analysis rating of 8 - 10.

Miles
0 0.25 0.5 1 1.5 2 2.5

Road System

- Town Class One
- Town Class two
- Town class Three
- Town Class Four
- Private/ Unknown Roads
- US and State Highways

Date: 3/17/2014

Document Path: E:\RPC\SHREWSBURY\planupdate maps 2013\TP 2008\Natural Resources Map2 2013.mxd

Town of Wallingford
Town Plan

Adopted February 4, 2013

13.0 Goals, Objectives And Policies

13.1 Introduction

Vermont Statutes (24 VSA s. 4302) provides that "municipalities . . . shall engage in a continuing planning process that will further . . ." certain land use and development goals prescribed by the Vermont Legislature. The following Goals are intended to establish the overall direction and guidance for land uses and development in the Town of Wallingford in accordance with Section 4302. They are also intended to guide the protection of the environment and the preservation of rare and irreplaceable natural areas, scenic and historic features, and special resources.

13.2 Development Planning

The historic village centers of Wallingford, East Wallingford and South Wallingford are important economic and cultural assets, while the rural areas of the town support agricultural, forestry, recreational and low-density residential and commercial uses. The Town of Wallingford should pursue all reasonably available means of improving the utility of town centers as areas for future residential and commercial development while, at the same time, respecting the freedom of choice that our citizens have historically enjoyed to live and work in rural areas as well as village centers. The three village areas were designated as Village Centers by the Vermont Downtown Program through a process created by the legislature to recognize and encourage local efforts to revitalize Vermont's traditional village centers. This designation is a tool to support commercial activity in the center of Vermont's villages. Tax incentives for historic building rehabilitation and code improvements, as well as priority project consideration for Municipal Planning Grants are benefits now available to Wallingford's designated villages.

Goals

- Plan and encourage development and settlement patterns that maintain the historic character of Wallingford, including compact villages and rural countryside, provide our citizens with healthy, diverse and desirable housing, recreational and economic opportunities, and make wise and efficient use of our public and private resources.
- Provide for higher density residential development in village centers, and plan and provide infrastructure to support such development.
- Designate appropriate areas for economic and commercial development, and plan and provide infrastructure to support such development.

Policies and Implementation Strategies

- To the fullest extent reasonably possible and consistent with other provisions and policies of this Plan, maintain and encourage the historic settlement pattern of more densely settled villages and neighborhoods surrounded by working farms and forest land and lower density rural residential development.
- Provide residents with a variety of living opportunities in different settings, including villages, rural clusters, rural large lots and farms.
- Plan and develop public infrastructure, such as municipal sewer and water systems, town highways, and educational facilities to encourage residential and commercial land uses that reinforce existing land use patterns and that represent the efficient use and development of public infrastructure; develop capital plans and programs that will implement efficient public infrastructure planning,

construct public infrastructure in advance of development impacts and pressures to minimize conflict between reasonable and predictable land use and development and demands on public infrastructure.

- Adopt and implement mitigation strategies identified in the Regional Pre-Disaster Mitigation Plan and accompanying Wallingford Annex to lessen damages to town infrastructure caused by hazardous weather and man-made events.
- Protect and encourage the maintenance of agricultural lands for the production of food and other agricultural products, develop programs that facilitate the conservation of working farmlands, particularly in the three primary farmland sections of town, while at the same time, respecting the property interests and economic aspirations of the owners of farm and forest land.
- Research and consider "Form-Based Code" to encourage revitalization, infill and orderly growth of Wallingford's designated villages.

13.3 Economic Opportunity and Development

Viable, growing businesses and industries in Wallingford and in the Rutland Region provide satisfying, financially rewarding employment opportunities that are essential to the quality of life of our citizens, and provide the state and local financial resources that are necessary to achieve our social goals and support our public institutions. We must also recognize and accept, however, that no land uses, whether commercial, residential, agricultural or conservation, are without impacts and that the objective of land use planning and regulation to minimize undue impacts by achieving a reasonable balance between competing land uses.

In analyzing the benefits and burdens of commercial or industrial activity, attention should be paid to the correlation between a strong, viable economy and satisfying employment opportunities on the one hand, and our ability to achieve important public sector social objectives on the other.

Goals

- Nurture a strong and diverse economy that provides satisfying and rewarding job opportunities for residents, a strong and predictable economic base to support our public policies and institutions, and that maintains high environmental and community standards.
- To the extent consistent with the capabilities and the public and private resources of the Town of Wallingford, plan for, facilitate and support sustainable local economic growth and development.
- Facilitate, develop and manage an economy that provides the financial resources to enable the public sector to meet its obligations.
- Increase understanding of the correlation between strong economies and the availability of safe and affordable childcare.

Policies and Implementation Strategies

- Create a reasonable balance between conservation and preservation of existing land uses and a viable economy that provides economic opportunity for our citizens.
- Preserve and strengthen the town's retail, tourist, manufacturing and agricultural economies and provide reasonable opportunities, areas and public infrastructure for new businesses.
- Encourage meaningful private sector participation in the planning and implementation of local economic development strategies and programs.
- Coordinate economic development planning and support at the local level with regional strategies and programs.

address, in advance, the demands upon those facilities that will result from normal and predictable rates of growth and development.

- Develop land use management plans and strategies, and Capital plans and programs, so that housing and population growth does not over-burden the school's ability to provide adequate educational programs and facilities for students or other essential programs and services to the community.

13.5 Transportation

The private automobile is the dominant and most important means of transportation in the town, and any transportation planning in Wallingford and the Rutland Region must take into account the continuing dependence of our citizens, particularly those in rural areas, on automobiles as their primary means of transportation. At the same time, we recognize that bicycling and pedestrian travel are practical transportation modes, and both bicycling and pedestrian travel can substitute for automobiles in short trip commuting and shopping.

Goals

- Provide and maintain a multi-modal transportation system that is safe, efficient, cost-effective and practical.
- Plan for and implement a transportation system that promotes the other goals and policies of this Plan to direct appropriate and efficient land use patterns and economic and residential development.
- Promote walkability and bikeability in the designated villages and outlying areas.
- Provide and maintain a transportation system that meets the needs of all segments of Wallingford's population - not just those who can afford to own and operate automobiles.Evaluate and implement transportation improvements to mitigate the impacts of Route 7 through Wallingford village.

Policies and Implementation Strategies

- Maintain or improve the current level of service on all roads in town.
- Develop, manage and maintain roads to meet community level demand and maintain a rural character.
- Consider partnership with Vermont's Safe Routes to Schools Program;
- Analyze and compare a reasonable range of alternative transportation opportunities as part of the analysis of any new or proposed transportation projects, policies or improvements.
- Develop and implement capital plans and programs for transportation facilities, so that existing transportation facilities are utilized, and future transportation facilities are developed, to anticipate and address, in advance, the demands upon those facilities that will result from normal and predictable rates of growth and development.
- Develop land use management plans and strategies, and capital plans and programs, so that housing and population growth does not overburden the ability of existing or proposed transportation facilities to provide for normal and predictable rates of growth and development.
- Develop, adopt and implement standards for construction, improvements and maintenance of town and private roads.
- Evaluate and enhance transportation improvements, including traffic calming, that mitigate the impacts of Route 7 on Wallingford and South Wallingford villages, while generally supporting a highway cross-section of 8-12-12-8 outside village areas.

13.6 Natural and Historic Features

Wallingford's natural and historic features, including its streams, forests, lakes and ponds, aesthetic qualities and recreational opportunities, historic buildings and traditional land uses are an important component of the quality of life enjoyed by our residents and visitors. Not only are our abundant natural and historic features important to our quality of life, the beauty and environmental quality of our natural environment is one of the principal components of our economy, and the preservation and protection of those resources has economic as well as social benefits. On the other hand, we must respect the fact that many of what we characterize as 'our' natural resources are located on privately owned property, and that we must take care, in our zeal to protect those resources, that we do not prevent the reasonable use of the property upon which those resources are located, or impose upon the individual property owner a burden that should be borne by the public as a whole.

Natural and Fragile Areas - Wetlands

Goals

- Encourage the preservation and conservation of Class I Class II wetlands and vernal pools, and the values and functions that they serve, as defined by the Vermont Wetland Rules.

Policies and Implementation Strategies

- Educate the public about the functions and values of wetlands.
- Prepare and publish wetland maps, and before adoption of zoning regulations with respect to wetlands, make reasonable efforts to notify all affected property owners of any wetlands identified on their property.
- Avoid municipal regulations that duplicate existing state or federal wetlands regulations, so that property owners upon whose properties wetlands are located will not be subjected to duplicative, redundant regulatory programs.
- Provide in municipal regulations that issuance of a conditional use permit under the Vermont Wetland Rules will satisfy the requirements of municipal regulations.
- Encourage the preservation of wetlands and other natural areas through regulatory provisions that create benefits for property owners that protect and preserve wetlands.

Water Resources - Lakes, Ponds and Streams

Goals

- Protect and preserve the rights and interests of the public in the use and enjoyment of water resources.
- Encourage and provide incentives for residential, industrial and commercial development in such a manner as will minimize undue adverse impact on significant water resources to the greatest extent reasonably possible.
- Provide safe, healthy conditions for boating and water based recreation.
    - Protect and enhance the amount and quality of public recreational opportunities available on and around public waters.
- Protect and enhance significant fish and wildlife habitats, feeding areas, travel corridors and the ecology of rivers and streams.

Policies and Implementation Strategies

- Encourage property owners to protect streambanks and shorelines.

- Collect, update and disseminate information on Wallingford's current and future groundwater supplies.
- Identify and protect Wallingford's groundwater recharge areas.

Air Quality

Goals

- Maintain high air quality standards for current and future residential, commercial and industrial development in Wallingford and the Rutland Region.
- Ensure that air quality standards are fairly and equitably applied to existing residential, commercial and industrial development, and not just to new residential, commercial and industrial development.

Policies and Implementation Strategies

- Require proper installation and maintenance of heating, processing, manufacturing systems, and other potential generators of air contaminants.
- Ensure that new development and land use activities do not create undue adverse impacts on air quality, as measured by applicable air quality regulations.
- Consider a "No Idling" policy for schools, recreational facilities, Main Street, and other areas frequented by the community.

Wildlife

Goals

- Encourage the conservation of significant wildlife habitats
- Encourage the establishment and conservation riparian corridors and wooded corridors.

Policies and Implementation Strategies

- Educate the public about the functions and values of wildlife habitats, including corridors and vernal pools, and the protection of rare, endangered and threatened species.
- Prepare and publish wildlife habitat maps and, before adoption of regulations with respect to wildlife habitats, notify all affected property owners of any wildlife habitats identified on their property.
- Encourage the preservation of wildlife habitats and other natural areas through regulatory provisions that create benefits for property owners that protect and preserve wildlife habitats and other natural areas.
- Ensure long term protection of significant wildlife habitats and other natural areas through conservation easements, purchase, lease, tax incentives or other measures.
- Develop and maintain a community based wildlife conservation program.
- Encourage owners of existing developments, farms and forests to consider and take reasonable steps to mitigate the effects of their activities on biologically significant areas.
- Purchase land or development rights to particularly important areas of biological significance or that posses important habitat characteristics.
- Provide local tax incentives in return for habitat management agreements secured through conservation easements.

especially in winter or on poorly graded roads. Where the burdens of development on the financial resources of the Town are demonstrated to be excessive, development of such areas may be restricted unless the developer proposes and implements a plan to adequately mitigate such impacts.

Beneficial functions of slopes

Upland slopes also perform a beneficial function in the replenishment of valley water tables. Rainwater and moisture occurring at higher elevations is filtered down through forest soils and accumulates in the basins of the watershed.

Policies and Implementation Strategies

- Settlement should be restricted in areas where slopes are in excess of 20 percent, unless and until the developer has implemented adequate site designs and/or structural elements which address the adverse effects of development on steep slopes.
- New unpaved roads should not generally exceed a finished grade of 7 percent, although reasonable sections with grades in excess of 7 percent may be permitted if appropriate safety and maintenance provisions are implemented.
- New paved roads should not exceed a finished grade of 10 percent, although reasonable sections with grades in excess of 10 percent may be permitted if appropriate safety and maintenance provisions are implemented.
- Erosion should be controlled wherever possible by following the Vermont Handbook for Soil Erosion and Sediment Control on Construction Sites.

13.8 Energy Use

Goals

- The town encourages the responsible use of energy and the use of the least environmentally damaging sources of energy.
- The town encourages the use of renewable energy systems in both off-grid and net metering systems. The town may consider whether to create incentives for renewable energy systems.
- New buildings should be constructed so as to utilize the maximum feasible passive solar heating, use high efficiency lighting and appliances and meet appropriate standards of insulation and air infiltration to minimize energy use. The approval of larger scale residential developments should be made conditional on meeting such standards. The installation of on-peak resistance electric heat should be discouraged.
- Residents and owners of existing buildings should be encouraged to obtain a competent energy audit of the buildings with a view toward identifying and making cost-effective improvements in energy efficiency. When it is found to be practical, they should:
    - Be encouraged to retrofit those buildings to improve their insulation and efficiency.
    - Be encouraged to install highly efficient heating systems and to maintain and operate their existing heating systems to maximum efficiency possible. Wood heating systems should be designed and operated to achieve efficient and thorough combustion to minimize polluting emissions.
    - Residents and owners of existing buildings, including the town with respect to the school and the town office, should be encouraged to acquire and use high efficiency lighting equipment and appliances.

Rural Otter Creek Valley Multiple Resource Area

This area is listed on the National Register of Historic Places, and is the first Rural Resource Area designation in the state. However, there is no identification of any kind along the corridor, and no special provisions for development have been enacted locally along this corridor. The language establishing the district may offer some guidance here. For example, should an effort be made to preserve old barns by pursuing historic preservation grants? Should the Town apply for Community Development Block Grant funds to put together a Corridor Plan including signage, brochures, markers, viewpoints, etc? What appropriate things should be pursued?

Route 140 East Scenic Corridor

Route 140 is a scenic drive through varied and generally undeveloped lands. The route follows Roaring Brook, is crossed by the Appalachian Trail, provides access to recreational lands in the Green Mountain National Forest, including White Rocks National Recreation Area and to Wallingford Pond, and terminates at either end in a typical Vermont village. Designating the corridor as a scenic corridor in the Town Plan does **not** designate it as a scenic road under the state or federal scenic road program. It merely recognizes the road as a unique resource within the town, and may assist the Town in future negotiations with the state and with such entities as utility companies on the scale of highway improvements such as the width and style of bridges, the width of the 'clear zone', location of power lines, signage, eligibility for bike/pedestrian path funds, etc.

Lands above 2500 feet in elevation

All lands above 2500 feet in elevation appear to be within the GMNF. Lands that are above 2500 feet in elevation are generally steep, inaccessible and have poor soils for onsite sewage disposal due to depth to bedrock. An appropriate district for any such lands outside federal ownership would be a Conservation District with a very low density. In such a district, farm, forest and outdoor recreation uses are generally permitted uses, while any permanent structure usually requires a conditional use permit. Some towns allow single family dwellings as a permitted use. This latter depends on the road network, and the Town's position on maintenance of remote roadways.

Industrial Regions

The existing Industrial Zoning District does not distinguish between heavy and light industrial uses. The character of most of the existing industrial use, which is mineral or sand and gravel extraction, is clearly a heavy industrial use. However, manufacturing facilities such as those in the Clarendon Industrial Park at the airport are light industrial uses. The areas zoned industrial on the existing zoning map represent ownership by mineral extraction companies, except for the area between the railroad and Otter Creek in Wallingford Village and the small industrial area in East Wallingford. Separating the types of uses through the use of two districts, and thinking through how review of developments in each should be done, will provide excellent guidance for revisions to the Bylaws. Districts might be as follows:

Industrial District

This district is appropriate for manufacturing facilities which are enclosed, and which store the majority of raw materials and finished product under cover. These should be uses that do not generally emit noxious fumes, or generate high levels of noise. The industrial area in East Wallingford might appropriately be designated Light Industrial, as might the manufacturing area near the intersection of Maple Street and River Street. This designation is appropriate for most of the areas that are now zoned industrial. Clearly, the Pike operation, and the quarry in South Wallingford are heavy industrial uses.

Town of Mount Holly

Town Plan

Adopted April 8, 2008

The definition of open land includes agricultural lands. Fields for hay are maintained widely around Town, and some corn is grown as livestock feed. The last dairy farm ceased operation in 2006. Other livestock producers: beef cattle, sheep, hogs, chickens, turkeys, horses.

FOREST LANDS

Approximately 55% of the Town is currently covered by hardwood forests, primarily sugar maple, yellow birch, and beech; while 31% is in soft wood cover mainly red spruce and balsam fir. This translates into approximately 17,634 acres of hardwoods and 9,604 acres of softwood. (Map II a 7, Contiguous Forest).

LAND USE

According to the Change of Appraisal Notice published by the Listers of Mount Holly on May 24, 2003 the Town consisted of 1,272 properties. Dwellings were located on 713 properties. (See Map II a 7, Map IV 1) and other maps in this plan for the locations of "structures" – the majority of which are residences).

The property map from the 2007 Town Report is reproduced on Map II a 8 which depicts Public Lands, Conserved Lands, and properties in the Current Use program.

PUBLIC LANDS

2,331.5 acres (9.1% of the Town's area) is owned by the Okemo State Forest under management by the Vermont Department of Forest, Parks and Recreation. The Green Mountain National Forest covers 3,100 acres, or 9.5% of Mount Holly.

The State of Vermont owns two Wildlife Management Areas managed by the Vermont Fish and Wildlife Department. The Star Lake Wildlife Management Area (Map II a 9) is a 92.3 acre parcel of land bordering northeast Star Lake. It was donated by Judson and Margaret Lyon in 1979. 48 acres of the 739 acre Tiny Pond Wildlife Management Area (Map II a 10) are located in Mount Holly. It is part of the Coolidge West Management Unit which includes Coolidge State Forest. The WMA was formed from land donated in 1996 and 2002.

CONSERVED LANDS

The Yale/Bowen Forest is a 462 acre tract adjacent to the Okemo State Forest. It was willed to Yale University School of Forestry in 1924, in perpetuity to be "kept as a forest", by Elmer and Edward Bowen family in memory of their son Joseph Brown Bowen, a forestry graduate of Yale University, who died in service in World War I. The deed obligates the School to keep the forest forever. The land is managed by the Vermont Department of Forests, Parks and Recreation. Most of the Forest is northern hardwoods with some spruce plantations. Map II a 11 shows the location in New England of the forests operated by the Yale School of Forestry and Environmental Studies.

The Vermont Land Trust has an easement on 80%, or 273 acres, of the Forest Echo Farm

In 2003, the 77 acre Dana-Seward Farmland project on Route 155 was conserved in a joint effort by the Vermont Land Trust, the Freeman Foundation, 150 contributing residents of Mount Holly, Raymond and Clare Dana, and the Seward farming family of East Wallingford. The Vermont Land Trust received donations of conservation easements: in 2004, 46 acres opposite the Dana-Seward Farmland from John Fiske and Lisa Freeman; in 2005, a parcel of 64 acres from Lorena and Pete Doolittle.

Mt. Holly Wildlife Corridor Forest Legacy project is an effort to connect the two units of the Green Mountain National Forest – north in Shrewsbury and south in Weston - with a corridor of conserved land for wildlife, primarily for black bear. A tract of 391 acres was protected with a conservation easement

in December 2002. Forest Legacy funds in the amount of $303,000 were paid to the Ninevah Foundation. The cost share for the project was the purchase of a 273 acre tract nearby that used no Federal funds.

The Ninevah Foundation owns 840 acres as conserved land with highly restricted development available only to its members.

CONSERVED AND PROTECTED LAND

Tract	Acres
Green Mountain Nation Forest	3,100
Okemo State Forest	2,331
Star Lake Wildlife Management Area	93
Tiny Pond Wildlife Management Area	48
Yale/Bowen Forest	462
Dana-Seward Farmland	77
Fiske and Freeman conservation easement	46
Doolittle conservation easement	64
Forest Legacy	391
Forest Echo Farm - VT Land Trust	273
FEF Corp	351
Ninevah Foundation	840
TOTAL Conserved	8,076 = 28 %
TOTAL Mount Holly	29,338 = 100 %

As of 2003, there were 46 properties (43 with dwellings) totaling 6,315 acres in Current Use including Forest Echo Farm, Ninevah Foundation, Yale/Bowen Forest and Doolittle. Excluding those properties (featured above with a total of 1,639acres) leaves 4,676 acres in the State's Current Use program. The full name of the Current Use program is the Agricultural and Managed Forestland Value Program.

Adding conserved or protected land 8,076 acres to current use 4,676 = 12,753 or 43% or the Town's total acreage.

However, none of those acres is under Town control. This is an important fact given that the Okemo State Forest (and the two Wildlife Management Areas) and the Green Mountain National Forest are under the control of State and Federal governments respectively, with the Town accorded no rights in determining any future use of the land. (Planning Commission paper, 2004). The Okemo Ski Resort has been built, for no fee, on State forest land on the eastern side of the Ludlow Mountain (now commonly called Okemo Mountain), see Map V 2.

As the protected status of lands under the control of State and Federal governments cannot be guaranteed, the land conserved in Mount Holly assumes greater importance. "Perpetuity", depending on the definition of the term, applies to between 922 to 1,762 acres, or 3% to 6% of the Town's total acreage

NATURAL RESOURCES
comparison
MOUNT HOLLY, RUTLAND COUNTY, STATE of VERMONT

	Mt Holly	Rutland Co.	Vermont
Area of Land, Acres, 2000	31, 481	597,120	5,920,640
Area of Water, Acres, 2000	243	12,500	261,200
Private & Public Conserved Acres, 1999	6,794	134, 820	1,148,249
Private & Public Conserved Acres %	22%	23%	19%
Federal Conserved Acres, 1999	3,104	76,279	435,008
State Conserved Acres, 1999	3,213	29,948	378,563

enjoys the lake and has become a nuisance especially at the Belmont beach. The Vermont Department of Fish and Wildlife lists the Lake as a significant natural community.

Lake Ninevah

Lake Ninevah (formerly Patch Pond) is the largest pond in Town, approximately 270 acres in size, and currently supports a standard warm water fishery. Almost all of the land around the pond is privately owned, so that public access is limited to a small boat access ramp owned by the Vermont Department of Fish and Wildlife. There is no public beach or swimming area on the lake.

It is listed in the Natural Areas of Vermont: An Inventory of Natural Areas, 1972-73 (Inventory number 939B) by the Vermont Department of Fish and Wildlife as a moderate to good waterfowl nesting and feeding area. Nesting loons have frequently been reported on the lake in recent years.

Tiny Pond

Tiny Pond, on the boundary between Mount Holly and Ludlow, is smaller than Star Lake and totally surrounded by private land and is not accessible to the public.

Ground Water

A significant recharge area is on the summit of Hedgehog Hill marked by a seasonal pond and permanent wetland of about an acre – it provides springs on the flanks of the hill and to the springs feeding the village of Belmont

The only water system in Mount Holly is the spring-fed Mechanicsville Aquifer system that once supplied water to most of Belmont. Although no longer a business entity it still supplies a few buildings in the village. The rest of the Town relies on drilled wells or natural springs. (A map of town aquifers is being researched).

In Mount Holly the depth to bedrock or impervious soils (hardpan) is minimal – subsurface water moves more easily laterally rather than vertically – presenting a potential pollution problem.

WILDLIFE

Rare Flora and Fauna

See above Winslow Flats.

Black Bear

The western slope of Okemo mountain's upper elevations support significant beech stands, which are of major importance to bears locally. Lower elevations provide aquatic habitats with an abundance of early spring foods.

The Okemo State Forest thus provides a corridor connecting the Green Mountain National Forest to the south with conserved lands north of Route 103 and beyond that with the northern portion of the Green Mountain National Forest. Private lands on the north side of Route 103 and north side of Route 155 are critical to maintaining the land as wildlife territory. Collaborative work by the Forest Legacy program, the state of Vermont, the Nature Conservancy, and the Mount Holly Conservation Trust is in progress with the goal of making the bear corridor a continuous strip of conserved and protected land. (Map II b 4).

Deer Yards

In the winter, deer need the cover provided by conifer trees to reduce wind chill and heat loss, and to minimize energy expenditure by minimizing snow depth. The Vermont Department of Fish and

IX. ENERGY

The Town's energy consumption is affected by local efforts for conservation, energy development, and land use decisions.

In 2003, the following item was duly warned and adopted at the Mount Holly Town Meeting:

> "Be it resolved that the citizens of the town of Mount Holly urgently call upon our municipal leaders, state legislators, governor, and congressional delegation to put Vermont in the forefront of a sustainable energy future. Specifically, we request immediate and ongoing action on legislative initiatives designed to promote energy efficiency in Vermont's homes, businesses, public buildings, and transportation systems, and to encourage expansion of the renewable energy industry in the state of Vermont."

The Town is crossed by two high voltage transmission lines – 115kv (serviced by a substation of 2.5 megawatts) and 345kv (*recently upgraded)*

Most homes in Town are heated with petroleum products, but a substantial number heat with wood, and the Town is blessed with good supplies of this clean, renewable fuel. A few homes use solar energy, and there are two windmills, including the one at the Mount Holly Elementary School. Although Mount Holly is not rated as a good wind area, the school gets 11% of its energy supply from its windmill.

Although some homes generate all their energy needs and are therefore "off the grid", there is little town-wide dissemination of the experience of homeowners with alternative energy sources.

No water energy sources in Town are known.

Town Garage is using waste oil in its burner.

Conservation of energy used for outdoor lighting (and reduction of night light pollution) is addressed in the publication "Outdoor Lighting Manual for Vermont Municipalities".

PART B

THE PLAN

GOALS, POLICIES, IMPLEMENTATION

The discussion presented in the previous chapters provides background information and framework for determining planning goals and policies.

What follows are the goals, policies, and also the tasks by which the plan will be implemented.

.For the purpose of the Mount Holly Town Plan we define goals, policies, and implementation tasks:

Goals express broad, long range community aspirations relative to one or more category of topics.

Policies are statements of the Town's intent, or position, with regard to specific issues or topics. In certain settings, such as during Act 250 proceedings, policy statements shall serve as the basis for determining a project's conformance with the Mount Holly Town Plan. Goals provide context for understanding policies, but it is the policies alone that serve as the final statement regarding the Town's position.

Implementation Tasks are specific actions to be taken by an identified entity to support one or more policy and to achieve the community's long term goals. (Note that Implementation Tasks, below, are not listed in any particular order).

Priorities for implementing the tasks are identified as

- ongoing,
- short term (to be completed within one year of plan adoption),
- mid-term (1-5 years of adoption) and
- long term (5+ years from adoption).

Responsibilities
The Town government officials and bodies responsible for each task are identified. Other organizations whose assistance the Town will request are identified with "x"

Too often after a town plan is adopted, it is set aside and/or ignored. There are several reasons for this, including the lack of available resources – money, people, and time – to accomplish everything called for in the plan.

A town plan should, however, be viewed as a living document that describes a direction for the community.

The following goals, objectives and, most importantly, the implementation tasks should be viewed as a work plan to assist local decision-makers in a variety of settings, and include:

- Guiding the Select Board with budgeting and capital facilities planning
- Guiding the Planning Commission and landowners with local regulatory processes
- Serving as the "blueprint" for anticipated revisions to the Town's subdivision regulations, by describing the desired location, type, and intensity of future development

LOCAL PLANNING PROCESS TASKS	RESPONSIBILITY	PRIORITY
(Note: Tasks are not listed in any particular order)		
1. Provide an open, accessible, and civil government to all citizens.	Select Board	on-going
2. Foster enhanced communication among all elected and appointed bodies.	Select Board	on-going
3. Review current maintenance and use of the Town web site to identify opportunities to expand its effectiveness as a means for keeping citizens informed of local government activities.	Select Board Planning Commission	on-going
4. Continue to publish meeting schedules and meeting agendas for local boards and committees.	Committee Chairs	on-going
5. Establish an annual planning forum where community members can be heard and where a policy of pro-active involvement is fostered.	Planning Commission	short-term
6. Conduct surveys to solicit public opinion regarding policy priorities of the Town and the preferred rate of community growth and development.	Planning Commission	on-going
7. Hold periodic meetings to evaluate the Town's performance in implementing the Town Plan.	Planning Comm Work Gp	on-going

II. PRESERVATION

GOAL

To preserve and enhance Mount Holly's natural resources, scenic landscape, environmental quality, and historic heritage for the benefit of current and future generations.

POLICIES

1. Support the efforts of land conservation organizations to identify and to preserve land and other important natural resources.

2. Protect water quality in streams by ensuring:

- **a. adequate sewage disposal**
- **b. riparian buffers to protect water quality and fisheries habitat**
- **c. control of runoff and erosion**
- **d. restricted development in designated flood plains**
- **e. protection of groundwater supplies.**

3. Protect important natural resources and fragile features including wetlands, floodplains, unique geologic features, prime agricultural soils, and slopes in excess of 25%.

4. Protect critical wildlife habitat and important ecological communities including but not limited to deer wintering areas, rare and/or endangered species habitat, local fisheries, critical bear habitat and identified travel corridors from inappropriate or destructive development and land management activities.

5. Development on steep slopes, hillsides and ridgelines shall be carefully assessed to avoid or mitigate adverse impact to scenic resources, water quality, and public safety.

6. The Town shall advocate for State Wildlife Management Areas, State Forests and Parks, and the Green Mountain National Forest to be retained in public ownership now and in the future and to be managed for the long term health and well-being of the relevant ecological resources.

7. The extraction of earth resources, including sand, gravel and stone, shall be conducted in a manner that minimizes conflicts with properties in the vicinity, avoids adverse impacts to ground and surface water quality and other fragile features, and shall include plans for the restoration of extraction sites based on the unique conditions of the area affected.

ENVIRONMENTAL QUALITY TASKS	RESPONSIBILITY	PRIORITY
1 Promote best land management practices for water resources, through subdivision performance standards for runoff, erosion, stream ecology, and aquatic life.	Planning Commission	short term
2. Develop a plan for an assessment of water quality with recommendations for the implementation of necessary measures. .	Select Board Planning Commission Agency Natural Resources ”x” Rut Reg Planning Comm ”x”	on-going
2. Evaluate existing storm water management facilities and identify improvements that would enhance water quality.	Select Board Road Commissioner Rut Reg Planning Comm ”x”	on-going
3. Conduct the second part of a critical wildlife habitat inventory (ecological survey) to assist landowners and town planners to anticipate and to avoid possible conflicts between development and/or land management activities and wildlife habitat protection goals.	Planning Commission MH Conservation Trust ”x” NEGEF ”x” State of VT ”x”	short-term
4. Continue to review proposed subdivisions to determine the potential impact on fragile ecological communities and natural resources.	Planning Commission	on-going
5. Actively participate in the preparation of management plans for the state and national forests as well as the Yale/Bowen Forest and other public or conserved properties to ensure management strategies that are consistent with the goals of this Plan.	Planning Commission MH Conservation Trust ”x”	on-going

("x" = Organization to be asked for assistance with task)

III. GROWTH & DEVELOPMENT

GOAL

To accommodate a rate of growth and development that meets the needs of the community and, as expressed in the Town's vision, to remain a rural town with open spaces and significant undeveloped lands.

POLICIES

1. Growth and development trends will be monitored on an annual basis using the best available data, estimates, and projections.

2. Local infrastructure and services will be planned to accommodate anticipated increases in the Town's population.

3. Each new development will be evaluated for conformance with the Mount Holly Town Plan and associated polices, bylaws, and programs.

4. New development shall be sited to conserve significant undeveloped land, natural resources, and conservation lands, and to prevent strip development.

5. The rural landscape and rural character of most of Mount Holly's countryside, consisting of moderate to low density residential development, farming and forestry, and limited commercial enterprises such as outdoor recreation, home occupations, and cottage industries shall be maintained by:

a. ensuring that land subdivision is carefully designed to avoid, to the extent practical, adverse impacts to natural or fragile features, productive farmland, and other features which help to define the Town's rural character and working landscape;

b. the careful siting and landscaping of subdivisions on steep slopes, hillsides, and ridgelines;

c. encouraging land use that retains as much undisturbed rural and forest land as feasible.

6. Mount Holly will protect itself from untoward results of development by establishing guidelines pertaining to:

Access for emergency vehicles
Peace and quiet of neighborhood
Trees and scenic quality of ridge lines
Scenic views
Air and water quality
Off-street parking
Wildlife habitat
Exterior lights

	MH Conservation Trust "x" VAST "x"	mid-term
3. Review and update management plans for public recreation facilities and properties.	Select Board	short-term
4 Organize and/or work with volunteer groups to maintain the School's athletic fields and gym and Star Lake beach, skating area, and swimming water quality	Select Board	short-term
5. Request Vermont Fish and Wildlife Department to expand the list of acceptable use of the Lake Ninevah access point	Planning Commission	short term

("x" = Organization to be asked for assistance with task)

VIII. TRANSPORTATION

GOAL

To provide an efficient, cost effective, multi-modal transportation network that provides for the needs of the community.

POLICIES

1 Preserve the rural, historic, scenic character of Mount Holly by:

a. Retaining existing paved and unpaved roads with no widening or increase in paving unless necessary for public safety;

b. Maintaining safe and passable roads throughout the year consistent with the Vermont "Safe Roads at Safe Speeds" policy;

c. Requiring that all road maintenance activities focus on safety, efficiency, cost-effectiveness and prevention of deterioration, rather than on facilitation of greater traffic volume or speed;

d. Maintaining roads that can accommodate multiple modes of transportation, and recreation.

2. The Town shall provide a range of transportation options, including roads, transit, bicycle, and pedestrian facilities, to accommodate the current population.

3. The Town shall explore possible transportation systems within the Town and surrounding region to meet the needs of the elderly, disabled, and others without means of transportation.

4. Class 2 roads shall be maintained, as needed, to promote the efficient movement of traffic within and through Town, without undermining historic character or pedestrian safety.

5. Class 3 roads shall be maintained, as needed, to accommodate current traffic volumes, while maintaining the unique character of the Town's residential neighborhoods and rural areas.

6. The Vermont State Standards for the Design of Transportation Construction, Reconstruction and Rehabilitation on Freeways, Roads and Streets, dated October 1997 and prepared by the Agency of Transportation, shall serve as the Town's standards for maintenance and upgrade of public roads.

7. The Mount Holly Municipal Center and Belmont Village should serve as the transportation hubs of the community.

8. Provide adequate parking to meet the parking demand generated by new development.

9. Advocate for a Route 103 Corridor Management Plan as a means to address traffic concerns in Mount Holly and access to Ludlow and elsewhere on Route 103

10. The Town shall accept new roads, only if related to the existing road system, in order to minimize the impact of new roads on areas of historic, scenic, or natural resources. The Town shall require, to the extent possible, that new roads form an interconnected network of roads, especially in proximity to higher density residential districts, and the Town will avoid roads that transect contiguous forest areas.

11. The Town shall seek, to the extent practical, regional solutions to traffic management and transportation issues through active local participation on the Rutland Regional Planning Commission's Rutland Region Transportation Council and coordination with the Vermont Agency of Transportation.

12. The Town shall protect and maintain the historic and scenic features located within the rights-of-way of scenic roads.

13. All road construction public or private shall have as little impact as possible on important natural areas, and shall preserve historic and scenic features of the landscape.

14. The Town shall retain stone walls along roads as part of the rural, scenic, and historic character of the Town.

15. The Town shall remove healthy trees from the right of way only where necessary for safety, visibility, snow removal, utilities, or drainage.

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TRANSPORTATION TASKS	RESPONSIBILITY	PRIORITY
1. Through the Town's development regulations and driveway rules, continue to carefully control access to public roads in accordance with appropriate standards.	Road Commissioner Select Board	ongoing
2. Create and adopt an official map for the Town that indicates all existing and planned transportation routes, which might include: intersection improvements; traffic circulation improvements in Belmont (parking, one-way streets, traffic control, sidewalks); sidewalks; recreation paths; wetlands walkway.	Belmont Designated Village "x" Road Commissioner Planning Commission Select Board MHConservation Trust "x"	short-term
3. Through the Town's subdivision regulations, consider opportunities for proposed development roads to connect to contiguous existing or planned roads.	Planning Commission	on-going
4. Prepare and submit to the Town a Scenic Road Ordinance,		

and maintain designated scenic roads, in accordance with approved scenic road maintenance plans.	Planning Commission Road Commissioner	ongoing
5. Prepare a bicycle and pedestrian improvement plan for the Town that, at a minimum, addresses the following: a the creation and extension of trails along "ancient roads", b. the feasibility of creating horse trails in conjunction with neighboring towns	Planning Commission Road Commissioner Select Board	short-term
6. Explore with the Rutland RegionTransportation Council ways to improve transportation for those without access to private transportation, including transportation during emergencies.	Planning Commission	mid term
7. Keep abreast of changing regulations or funding regarding rail services and their effect on the Town.	Planning Commission Rut Reg Trans Council Rep	ongoing
8. Amend subdivision regulations to assist in the implementation of policies cited above.	Planning Commission	short term

("x" = Organization to be asked for assistance with task)

IX. ENERGY

GOAL.
To encourage the efficient use of energy including the development and use of renewable energy resources.

POLICIES

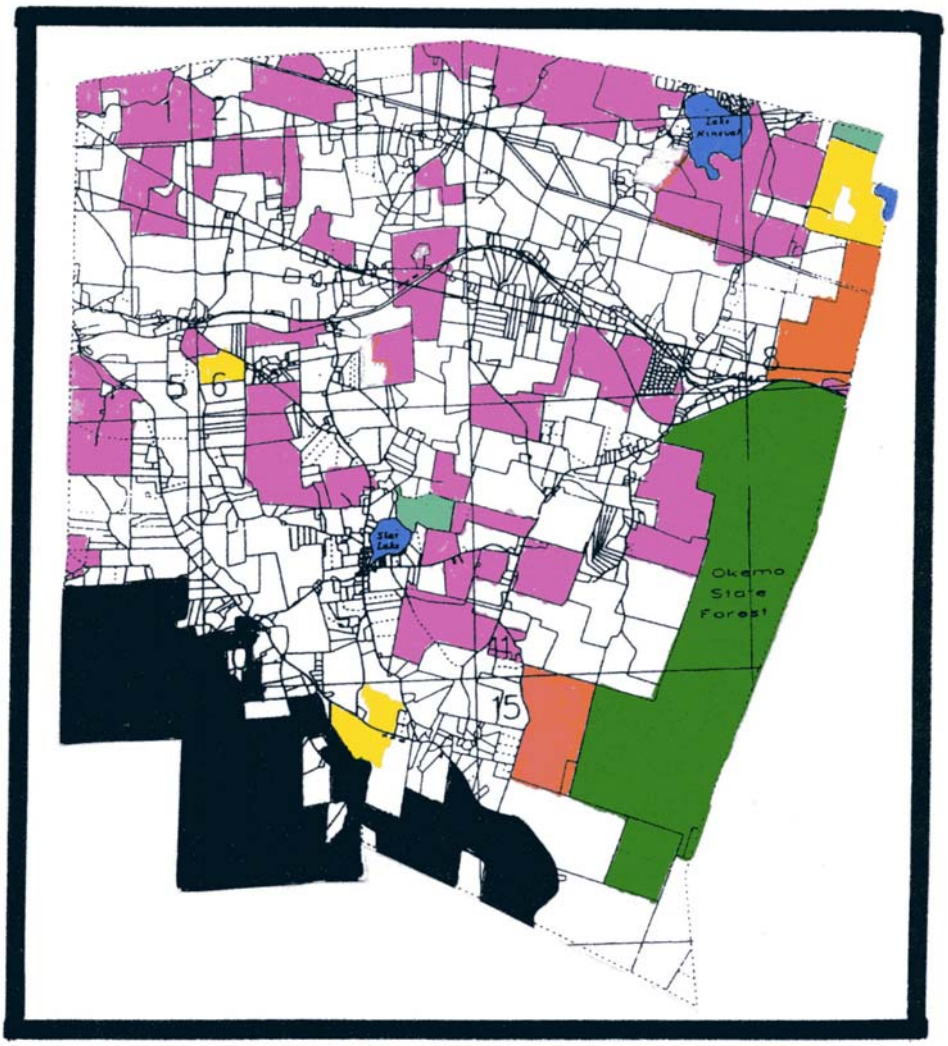
1. Town energy expenditures shall be reduced to the extent feasible through energy efficiency and conservation.

2. Energy efficiency, conservation, and renewable energy resources shall be considered in new Town construction projects, equipment purchases, and operations.

3. Energy efficient building and site design which reduce energy requirements for lighting, heating, cooling, and transportation, including but not limited to the clustering and siting of buildings and the use of landscaping and screening shall be encouraged as applicable under local regulations and ordinances.

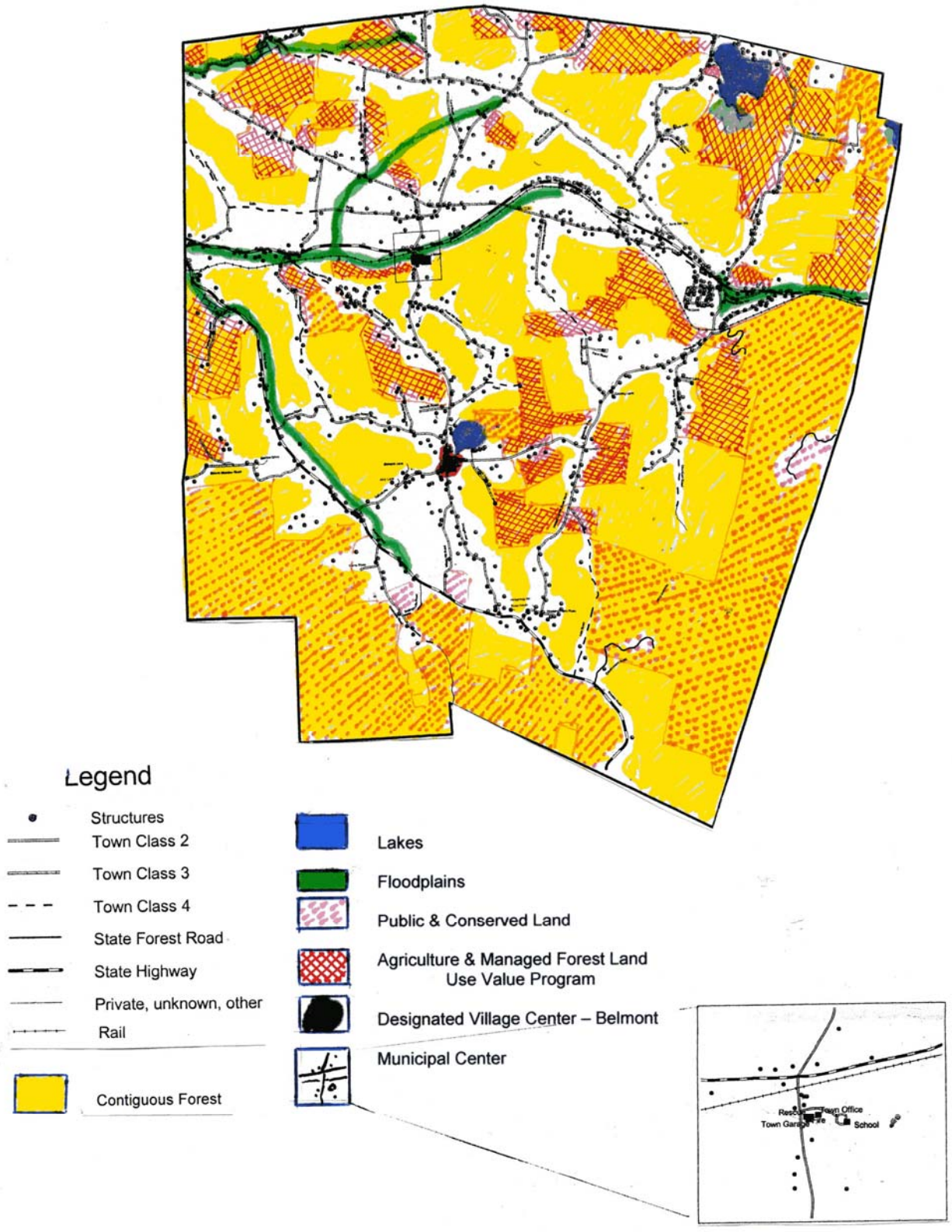
4. Encourage energy efficiency, energy conservation, recycling, and the use of renewable and alternative power and fuel sources (including wind, water, solar) within the Town of Mount Holly.

5. Ensure that development of alternative energy sources does not negatively impact the environment or the character of the community.



Map II a 8 **MOUNT HOLLY PUBLIC and CONSERVED LANDS**

- Green Mountain National Forest
- Okemo State Forest
- Vermont Wildlife Management Areas
- Bowen/Yale Forest
- Vermont Land Trust Conservation Easement
- Forest Legacy easement In process
- Agricultural and Managed Forest Land Value Program – Current Use



MOUNT HOLLY FUTURE LAND USE

Town of Ludlow Municipal Development Plan

Adopted March 5, 2013

3. NATURAL RESOURCES

One of Ludlow's greatest assets is the abundance of natural resources and attractions including: Ludlow (Okemo) Mountain, Buttermilk Falls and the Ludlow area lakes, which are available for the use and enjoyment of residents, visitors, businesses, and industries. Ludlow's natural environment provides shelter and sustenance for wildlife and serves as the foundation for much of the municipality's economy.

The intrinsic value of the natural resources in Ludlow can be traced from the Town's early history. The early agrarian society, based on sheep and dairy farming, relied on the land to support their livestock and families. Later, Ludlow's woolen textile mills depended on the Black River to meet needs for power and water. Today, the commercial agrarian segment of the economy has been reduced to next to nothing. Earth mineral resources, including talc, gravel, and gold, have also played a role in Ludlow's development but most have also been greatly reduced in recent years.

Today, the recreational and scenic values of Ludlow's natural environment attract the travel and tourism market. The tourism industry attracts people with a desire to participate in all varieties of outdoor activities. These activities include: skiing, hiking, biking, swimming, snowmobiling, golf, hunting and fishing to name just a few.

Protection and preservation of Ludlow's important natural amenities are vital to maintaining a fundamental component of Ludlow's economic base. Economic pressures on landowners to subdivide and develop large forested areas, fallow

agricultural lands, and land areas beside beautiful streams and lakes can be overwhelming. The potential economic gains associated with tourism, development of second homes, and related businesses and industries must be balanced with efforts to preserve the natural features that created the attraction in the first place. The challenge, for all concerned, with growth and development in Ludlow lies in achieving that crucial balance.

In recent years, energy costs have increased significantly, therefore, we as a municipality need to think "outside the box" on how our natural resources can be sustainably utilized as a local energy source and benefit to our local economic future.

John Garbaldi Sargent, U.S. Attorney General under Calvin Coolidge.

Born October 13, 1860 in Ludlow, Vermont, Sargent was schooled at Black River Academy, graduating in 1883, and then entered Tufts College in Boston, Massachusetts. After college, Sargent returned to Ludlow where he married Mary Lorraine Gordon in 1887. In 1908 Sargent was named Attorney General of Vermont. He campaigned vigorously for Warren G. Harding in 1920 and Calvin Coolidge in 1924.

Sargent was named Attorney General of the United States on March 17, 1925.

In 1930 Sargent returned to Vermont and again took an active role in his law firm. Sargent died at his home in Ludlow, Vermont, on March 5, 1939.

Forest Resources

The management and prevention of forest fragmentation is a key component in the long term health and productivity of Vermont forestland. The creation of smaller forest patches due to development of housing and associated components such as roads and power lines are detrimental to the health and economic viability of forested areas.

Forested land in Ludlow comprises a majority of the total land area and serves as a major asset. The Okemo State Forest and other state-owned lands represent 14.8 percent of the land area in Ludlow.

A majority of the forested lands in Ludlow are privately owned. Landowners are under increasing financial pressure to sell or convert those lands to land uses other than forestry. Vermont's Use Value Appraisal (or Current Use) Program has been successful in bringing a large amount of private forestland in the Region under sound management plans. The Table 3.1 summarizes forested lands enrolled in the Current Use Program, comprising about 11.3 percent of the total land area in Ludlow.

Vermont's Forest Legacy Program is a

Table 3.1: Current Use Program – Ludlow

Total Acres	Forest	Non-Productive	Agriculture	Total Enrolled	% Total Acres
21,704	2,458.52	20.55	2,673.96	2,673.96	12.3

voluntary grant program that seeks to conserve important private forestlands. The funds can be used to acquire property (fee simple) or establish conservation easements allowing for future forestry uses, while also allowing for outdoor recreational uses and wildlife habitat.

Forest Resources – Goal

1. Preserve and protect Ludlow's forest resources to ensure continuation of their environmental, aesthetic, and economic values.

Forest Resources – Policies

1. Encourage measures that balance supporting land-based economies, protecting large blocks of forested lands, with supporting development in or near village centers.

2. Proposed roads or utilities should be sited to cause minimal negative impact to forest contiguity and aesthetics.

3. Support productive, sustainable forestry on large lots, contiguous blocks of forested lands, and forested corridors linking large tracts of forest lands, and maintain accessibility to those lands. Doing so will contribute to maintaining the ecological values and economic vitality of these forested areas.

4. Take advantage of the voluntary Vermont's Forest Legacy Program to set aside tracts of forested areas in Ludlow.

Forest Resources – Recommendations

1. Review Subdivision Regulations for protection against forest fragmentation.

Agricultural Resources

Protecting important agricultural soils, while also encouraging smart growth, is challenging. Many historic villages, including Ludlow, are located in river valleys and are surrounded by areas of prime agricultural soils and /or agricultural soils of statewide significance. (See the Agricultural Soils Map.) Agricultural soils that are rated by the Natural Resources Conservation Service as prime, statewide or locally important are regulated through Act 250 Criterion 9(b). Large blocks of prime agricultural soils are beneficial to allow for future farming. However, a balance is necessary in order to protect agricultural soils, while allowing the flexibility to facilitate new growth within or adjacent to historic villages in accordance with the State Planning Goal in 24 V.S.A. 4302(c)(1).

Though large working farms are no longer active in Ludlow, a few horticultural crops and, domestic livestock are still raised, primarily for family or specialty use. These small-

scale agricultural activities contribute to the overall scenic qualities and visual identity in Ludlow, when effectively interspersed with other compatible land uses.

Agricultural Resources provide meadows, pastures and fields that create visually appealing open land which contrasts with forested and appropriately developed lands.

Careful consideration shall be given in areas higher than 2,500 feet in elevation and with slopes greater than 25% to avoid any negative impacts new construction may have on the environment, such as degradation of water quality, erosion of topsoil, and encroachment on wildlife habitat.

Soils and Agricultural Resource – Goal

1. Promote land use development patterns that do not diminish the future viability of local agricultural activities.

Soils and Agricultural Resource - Policies

1. Conserve agricultural lands, as shown on the Agricultural Soils Map, for their current and potential value.

2. State-adopted Accepted Agricultural Practices and Acceptable Management Practices shall be used in agricultural and forestry activities, implementation of Best Management Practices (BMPs) are encouraged in such operations, and point and non-point source pollution should be minimized.

3. Seek public/private funds for the conservation of agricultural lands.

4. Development should be sited in order to avoid unstable soils that offer poor support for foundations or footings and are subject to slippage, or are poorly suited for road construction. Extensive site investigations and erosion control plans may be required to determine the development suitability of such soils.

Soils and Agricultural Resource - Recommendations

1. Review land use regulations for addressing prime agricultural soils and development on steep slopes and fragile soils.

Water Resources – Goal

1. Protect water resources for the health, safety and enjoyment of Ludlow citizens.

Water Resources – Policies

1. Ensure that development in the watershed areas of Lake Rescue and Lake Pauline does not adversely affect water quality and the scenic value of these lakes.

2. Protect shorelines and stream banks from surface runoff that could lead to excessive erosion, sedimentation, and/or other pollution of surface waters.

3. Protect the quality and capacity of groundwater consistent with state statute and zoning bylaws.

4. Encourage compatible uses of surface waters for recreation, tourism, and economic benefit where such uses will not impair water quality, or wildlife and/or aquatic habitat.

5. Development in flood hazard areas shall be in compliance with the Ludlow's Flood Hazard Regulations.

6. Destruction of Class 1 and 2 wetlands and construction in wetlands should be avoided.

7. Land uses within the Aquifer Protection District and wellhead protection areas shall not threaten the quality of groundwater supplies.

8. The storage or use of chemicals that could contaminate groundwater within Source Protection Areas shall not be allowed.

9. Encourage Low Impact Development (LID), including but not limited to rain gardens, limiting impervious surface lot coverage, and protecting existing natural vegetation, in order to maximize on-site stormwater infiltration and minimize off-site stormwater and erosion impacts.

10. Support efforts to improve the water quality of the lakes, such efforts may include preventing the spread of Eurasian water milfoil, upgrading failing septic systems along lakeshores, implementing proper stormwater management activities to prevent sediment migrating from roads and driveways.

Water Resources – Recommendations

1. Work cooperatively with the Connecticut River Joint Commissions, the Black River Watershed Association, the Lake Association and others involved in water quality issues in order to implement the following water quality protection strategies:

Four rare or uncommon plants have been documented by the State Department of Fish and Wildlife in the Ludlow area (one is classified as very rare, two as rare, and one as uncommon). The Wildlife Habitat Map of Ludlow shows the general locations of these rare plants. Efforts to protect these rare species prevent publication of their specific location.

Maintaining Wildlife Resources should be done by the encouragement of protection measures and preservation of sufficient healthy resources.

Photograph by Tom Johnson

Wildlife Resources – Goal

1. Preserve important wildlife habitat for biodiversity.

Wildlife Resources – Policies

1. Control development in environmentally sensitive areas.

2. Ensure that methods of waste disposal, construction, road paving or maintenance; or disturbance of habitat, and other human activities do not lead to pollution or destruction of wildlife habitats.

3. Establish preservation measures for areas identified as critical habitat for the survival of wildlife species.

4. Support private organizations, landowners and others who are involved in efforts to ensure the continuation or enhancement of Ludlow's wildlife population.

5. Encourage the economic community that involves or relies on fish and wildlife populations to contribute to sustaining Ludlow's wildlife resources.

6. Encourage landowners to avoid subdivision or fragmentation of land that would result in significant loss or degradation of fish and wildlife habitat areas.

Wildlife Resources - Recommendations

1. Ensure bylaws encourage appropriate use and preservation of important resources, including large tracts of forested land, fresh water resources, mineral

deposits, wildlife habitats, agricultural lands and environmentally sensitive and scenic resources.

2. Develop a mitigation policy and provide development guidelines for mitigating any negative effects on deeryards, bear travel corridors or other important habitat areas.

3. Incorporate State, Federal and local educational measures, funding or incentives to encourage land owners to protect and preserve natural resources

4. Work with local, regional, State and Federal agencies to promote appropriate use, preservation, and protection of important resources.

5. Develop an inventory of natural, environmentally sensitive and scenic resources to be used in protecting and preserving these features.

2. Within the service area, supply municipal service to new development and to owners of existing failed or failing septic systems.

3. Encourage maintenance and upgrading of onsite systems to prevent well contamination, pollution or other problems associated with improperly installed or failed systems.

4. Continue regular updates of the Capital Budget and Program for municipal water and wastewater system needs.

Electrical Services

As discussed in the Energy Chapter, the Village of Ludlow Electric Light Department and Central Vermont Public Service (CVPS) supply electricity. The general service areas for both providers are defined in the Energy Chapter of this Plan. The Utilities and Facilities Map of Ludlow illustrates electrical transmission lines. Existing service capacity is considered sufficient to meet current and future demand.

Monthly winter energy peaks are evaluated to establish peak demand estimates. Generally, ISO New England raises costs to utility companies in response to increases in local peak demand. Ludlow Electric Light has developed Demand Side Management programs (DSMs), which are designed to maintain or lower peak demand and help avoid escalating consumer costs. Ludlow Electric's DSM efforts involve a fuel switching program that encourages customers to replace electric heating with an alternative heating source, such as propane, oil or renewable fuels, which reduces Ludlow's demand for electricity. Ludlow Electric also encourages customers to contact Efficiency Vermont for tips on reducing their consumption. Other DSM techniques include weatherizing buildings, using energy star rated appliances, energy star rated buildings, lighting upgrades (e.g. compact fluorescent (CFL) or LED lighting).

Electrical Services - Goals

1. Ensure a supply of safe, reliable electricity to meet the needs of residents, businesses, industries, and visitors at a reasonable cost.

2. Keep peak demand for electricity low and support methods to improve efficiency and energy conservation.

Electrical Services - Policies

1. Encourage electrical service suppliers to continue trying to reduce peak demand.

2. Support efficiency and demand side management strategies designed to reduce costs.

3. Continue to evaluate the placement of electric lines and facilities for health, safety, and aesthetic concerns.

Electrical Services – Recommendations

1. Locate and schedule expansion of electrical facilities and services to coincide with the need for desired development.

2. Encourage the use of existing infrastructure and services.

3. Educate building owners about energy efficiency services provided by Efficiency Vermont.

Communication Services

Telephone service is provided by Telephone Data Services (TDS). Other telecommunications services in Ludlow include cellular phone, paging, Internet access (cable, DSL or dial up) and cable television, which are provided by Comcast or TDS. A local access television channel which broadcasts meetings and hearings held by the various town and school boards and commissions is available to cable subscribers. This service has proven to be popular among many citizens who cannot attend these meetings but are nonetheless interested in local affairs. The municipality maintains a web site (*www.ludlow.vt.us*) that is broad in scope, helpful and informative. Public notices for up-coming public meetings, minutes of meetings of various boards and phone numbers of municipal departments are among the things posted here.

The maintenance of a modern and accessible telecommunications network is considered essential to the public welfare, access to educational opportunities and economic development efforts. Countless economic, social, and cultural benefits are available to communities, which possess free and open access to people and ideas in other parts of the world. Public safety agencies, such as emergency medical services, fire, and police departments, rely on wireless communication to provide essential services.

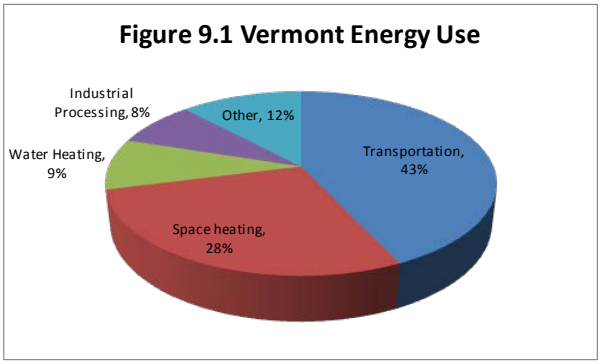
At the same time, the system infrastructure must be developed in an efficient, safe, and thoughtful manner. Possible impacts upon scenic and cultural resources, aesthetics, and public health should all be considered during the planning process.

Siting and construction of telecommunications towers can negatively impact scenic resources vital to a Town's and surrounding communities' economic future and cultural richness. The Town of Ludlow adopted the Telecommunication Facilities Ordinance in 2008 in order to balance the benefits of an integrated and modern telecommunications network, with minimizing negative impacts of its development.

9. ENERGY

Photograph by Tom Johnson

The purpose of this Chapter is to (1) analyze local energy resources and needs, (2) identify how to reduce municipal operational costs through energy efficiency initiatives, and (3), in coordination with the Land Use Chapter, encourage land use patterns that result in energy conservation as required by 24 V.S.A. §4382.



Insulating and weatherizing improvements to existing buildings as well as using energy efficient appliances and lighting can greatly reduce energy demand. In addition, expanding the use of renewable energy resources can reduce demand on non-renewables and help to improve national energy security and self-sufficiency. According to the Vermont Renewable Energy Atlas, there are currently two net-metered renewable energy systems located in Ludlow, one solar photovoltaic and one a wind turbine.

Energy Analysis

Transportation is largest portion of energy use in the state of Vermont at 43% (see Figure 9.1). Space and water heating combine to use 37% of the statewide energy.

Hydroelectric

There are currently no hydroelectric facilities in Ludlow; however, six existing dams have the potential to produce 45 kW of power according to the Vermont Renewable Energy Atlas (see Figure 9.9). Historically, a few dams were used in Ludlow to generate the power to operate mills. Feasibility studies would help to identify the cost/benefit of the investment required to establish hydro facilities at any of these locations. Mini-hydro or run-of-the-river technologies are much smaller and have less environmental impact, but are difficult to permit as of this writing. A few municipalities are looking into such systems installed in municipal wastewater systems in order to generate power to operate the plant.

Energy – Goals

1. Continue to reduce energy consumption in Ludlow.
2. Reduce demand for fossil fuels by promoting public transportation, ride-share programs and other programs that lessens the dependence on single occupancy vehicles.
3. Promote the development of a transportation system that reduces the use of single-occupancy vehicles, and enables increased non-motorized vehicle and pedestrian traffic. This network should emphasize non-motorized links between schools, stores, work and home.
4. Promote new development to locate within or directly surrounding the Village in order to encourage walking, bicycling and public transit usage, and minimize reliance on motor vehicles for travel needs
5. Encourage land use patterns and development that use energy more efficiently.
6. Save money by reducing the overall energy consumption of municipal buildings and operations through a variety of cost-effective conservation and efficiency projects and strategies.
7. Promote the development of local renewable resources as a replacement for imported nonrenewable resources.
8. Increase public awareness of energy issues and build public support for energy efficiency and sustainable energy policies.
9. Promote workforce training for green or renewable energy related careers.

Energy - Policies

1. Conserve existing non-renewable energy resources. Support the gradual reduction in the use of fossil fuels and conversion to fuels derived from renewable energy resources.

2. Improve management and promote the use of Ludlow's woodlots for efficient energy uses.

3. Encourage owners of forested lands to follow the Accepted Management Practices (AMPs) established for silviculture.

4. Support efforts to educate consumers about the environmental and energy benefits of the complete combustion of wood.

6. Endorse the development and use of residential-scale renewable energy systems, such as solar heating, photovoltaic, wind, geothermal and mini-hydro.

7. Advocate the use of cost effective building siting and construction techniques (e.g. passive solar building orientation, etc.) in order to gain solar energy for space heating, water heating, lighting, and electricity.

8. Require an energy impact analysis for all major development proposals, assessing the quantity and source of increased energy consumption resulting from the development.

9. Prior to the approval of new commercial power generation facilities and additional or upgraded transmission or distribution lines or facilities, utilities shall demonstrate that they have first maximized demand management and energy efficiency and conservation efforts.

10. Commercial energy production facilities shall not have undue adverse impacts on significant wetlands, plant or wildlife habitat, scenic resources or inventoried historic or cultural resources.

11. Where development and construction of commercial renewable electric power generation facilities are proposed, plans must consider placement of such facilities in locations where aesthetic and wildlife impact is minimal or reasonable measures have been employed to mitigate adverse impacts.

12. Any commercial wind energy systems under review by the Public Service Board shall meet the Wind Energy Siting Policy as described in this Chapter.

Energy - Recommendations

1. Establish an energy committee in accordance with 24 V.S.A. Chapter 117 §4433 and §4464.

2. The Energy Committee, when established, will inventory and conduct energy audits on municipal facilities, and develop a strategic plan to make energy efficiency and conservation upgrades.

3. The Municipality will construct all new public buildings according to standards of energy efficiency at least equivalent to U.S. EPA Energy Star rating or similar certification where it can be demonstrated to be cost-effective.

4. Examine the feasibility of expanding and improving coordination with the public transit and shuttle systems to accommodate more people in Ludlow and neighboring areas.

5. Advocate programs that will improve economic support for owners of forested land through zoning and tax regulations.

6. Investigate the cost and potential benefit of increasing or converting to the use of efficient wood burning devices for space heating and hot water in municipal or school facilities. Consider combining with other renewable energy technologies for greater conservation and reduced pollution.

7. Develop criteria for evaluating site design plans for the placement and aesthetic aspects of proposed solar and wind energy devices.

8. Promote combined use of solar and/or wind energy technologies with other renewable energy resources for conservation, reduced pollution, long range cost savings and tax savings.

9. Evaluate potential public solar or wind energy sites for energy potential and cost feasibility prior to construction

10. Adopt practical energy conservation standards in land use regulations in order to maximize the energy efficiency of development through siting, design and construction.

Gore Recreational District includes Public Use Lands consisting of 51.16 acres of open undeveloped land.

Lakes District

The purpose of this district is to preserve and enhance high quality waters, to provide for the beneficial use of public waters by the general public, to protect shore lands of waters which are suitable for development, to maintain low density of development and to maintain high standards of quality for permitted development. Future development shall avoid strip development along VT Route 100.

Aquifer Protection District

This district is designated for preservation based on unique environmental characteristics, such as the aquifer recharge area. Although dispersed, very low density residential uses may occur within the conservation area; future high-intensity development is not suitable and is strongly discouraged in this area.

Industrial

The industrial designation makes provision for uses, which are appropriate for industry. The overriding use within the industrial area will be heavy industry, including mineral extraction and manufacturing. There may be a few remaining residences and commercial uses within the industrial area; however, future residential development is to be discouraged.

Conservation

The conservation area generally includes publicly owned or publicly conserved lands within the Town and Village of Ludlow. The purpose of this area is to provide for outdoor recreational activities, as well as to conserve forests for sustainable forestry, wildlife habitat, improved water quality and the preservation of Ludlow's rural character. Since these areas are publicly owned or conserved, future development is limited to sustainable resource management, public access and outdoor recreational facilities.

Special Considerations

Wetlands

These are areas, which exhibit suitable soil characteristics and moisture levels, which are defined in the *Vermont Wetland Rules*. This designation may also encompass lakes, ponds, streams, and other areas of open water. These wetlands must be protected.

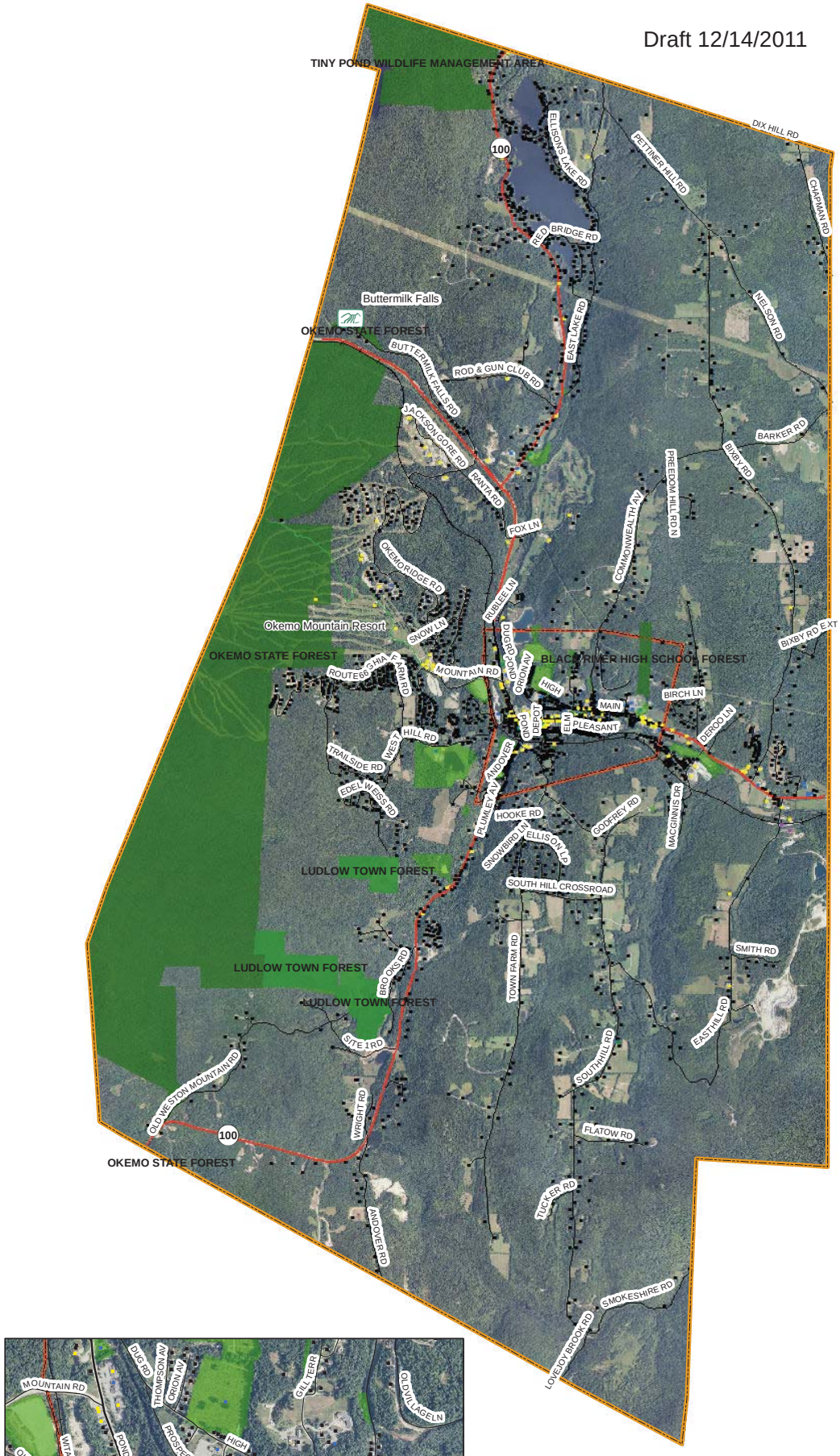
Flood Hazard Areas

Any development within the flood hazard areas as mapped by FEMA is subject to review under either the Village or Town of Ludlow Flood Hazard Regulations.

Draft 12/14/2011

LUDLOW

Current Land Use



Buttermilk Falls
LUDLOW
Town Owned Land
Commercial
Industrial
Civic
Residential
Railroad
Class 1 TH
Class 2 TH
Class 3 TH
Class 4 TH
State Forest Highway
Private Road
VT State Highway
Conserved Public Land
Village Boundary

Miles
0 1 2

VT State Plane,
Meters, NAD 83

For planning purposes only.
Not for regulatory interpretation.

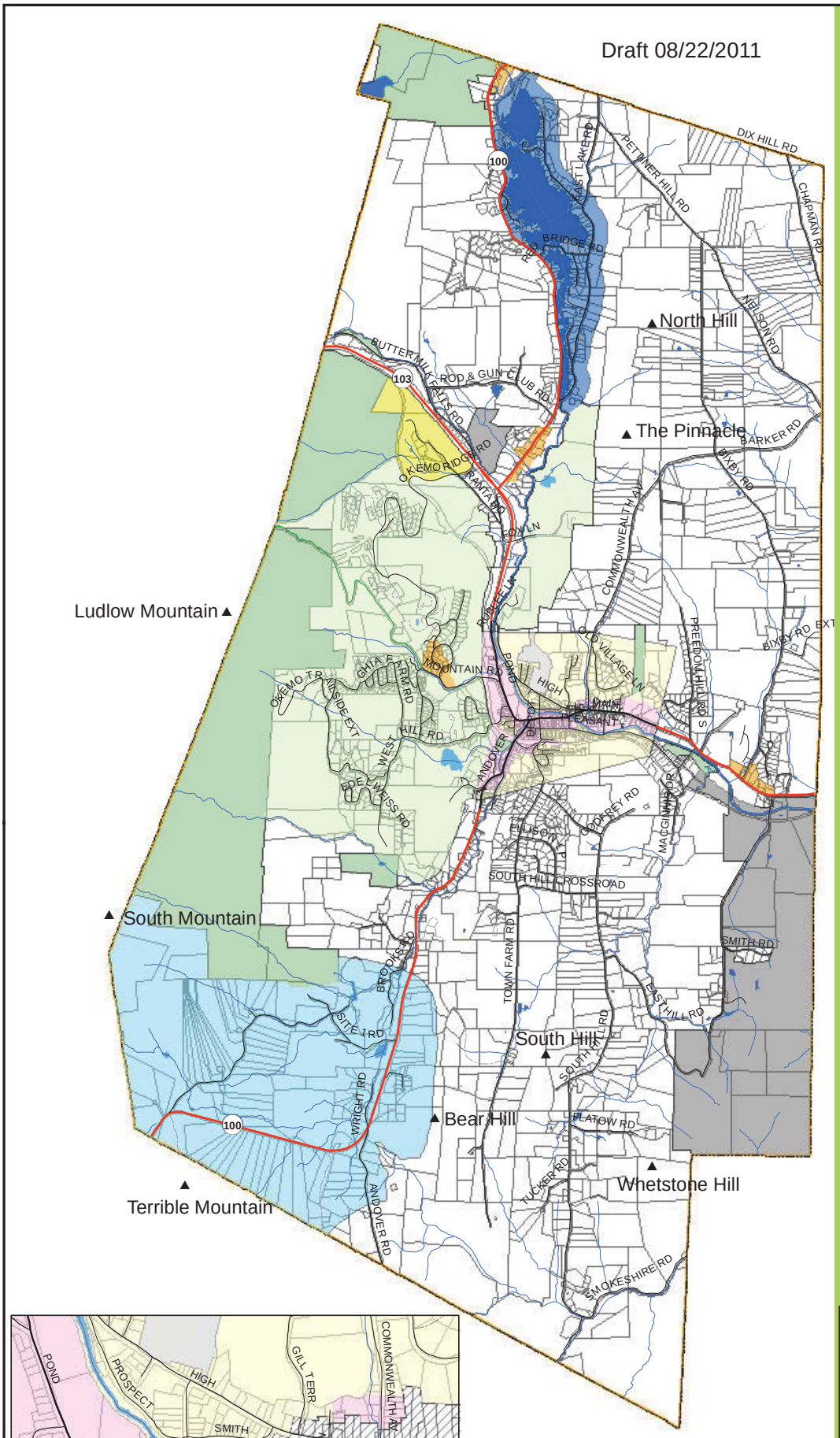
GIS
for info & data - www.vcgi.org

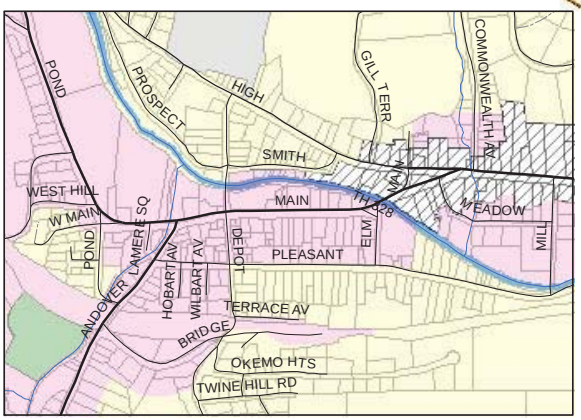
Southern Windsor County
Regional Planning Commission

SWCRPC
PO BOX 320
Ascutney, VT 05030
802.674.9201
www.swcrpc.org

LUDLOW
Future Land Use

Draft 08/22/2011





Miles
0 1 2

- Class 1 TH
- Class 2 TH
- Class 3 TH
- Class 4 TH
- State Forest Highway
- Private Road
- VT State Highway
- Stream
- Aquifer Protection
- Cemetary
- Conservation
- Industrial
- Jackson Gore Recreation District
- Lakes District
- Outdoor Recreation
- Preservation District
- Residential Commercial
- Rural Residential
- Village Mixed Use
- Village Residential Neighborhoods
- Town Boundary
- Pond
- 2010 Parcels

VT State Plane,
Meters, NAD 83

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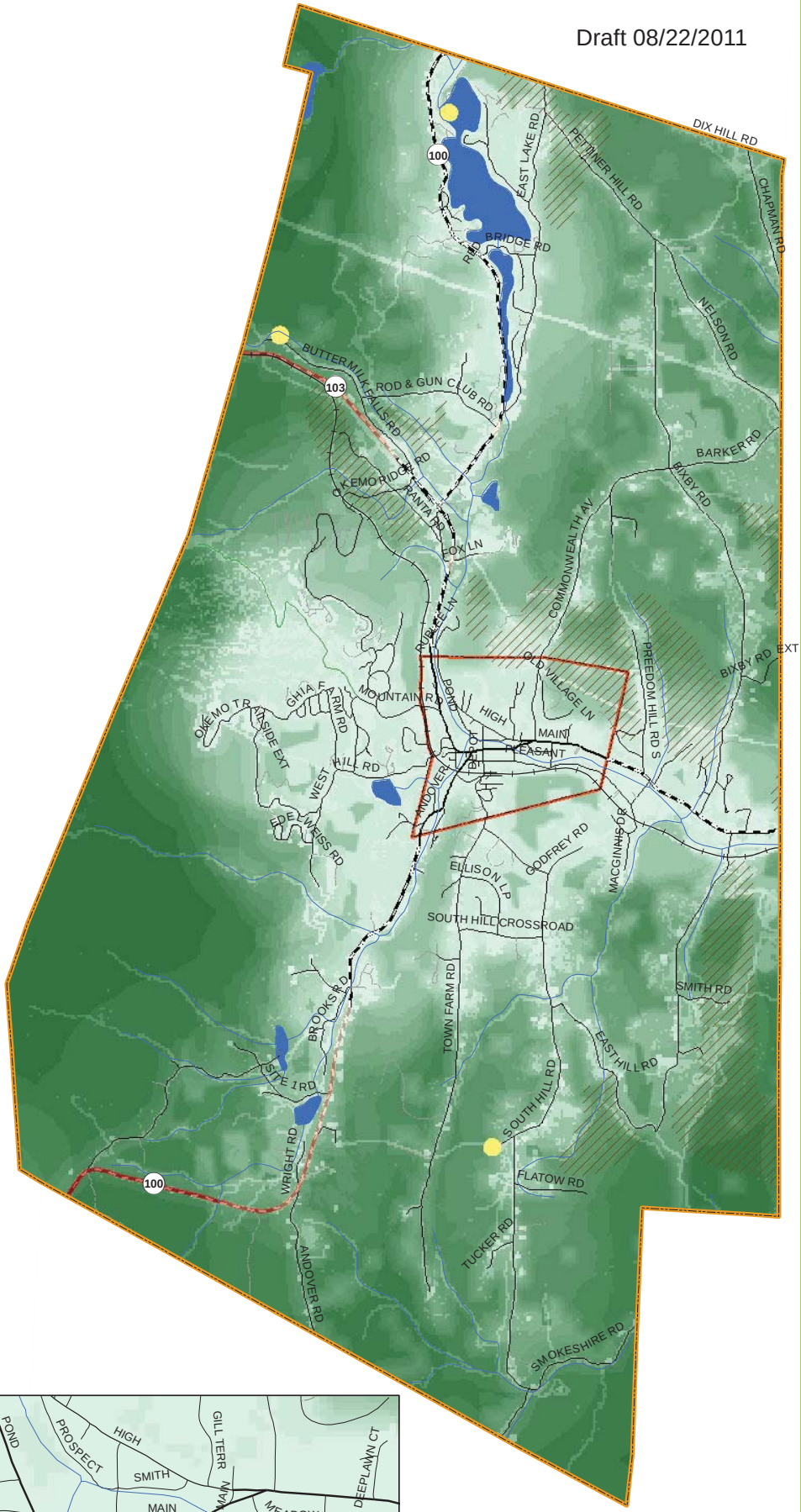
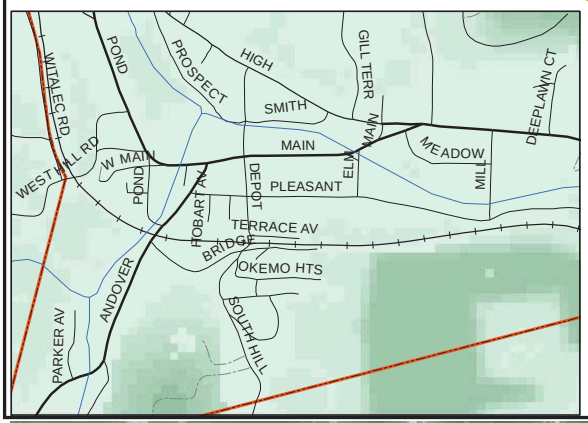
Draft 08/22/2011

LUDLOW
Wildlife Habitat





Class 1 TH
Class 2 TH
Class 3 TH
Class 4 TH
State Forest Highway
Private Road
VT State Highway
Stream
Pond
Railroad
Village Boundary
Town Boundary
Rare, Threatened or Endangered Species
Deer Wintering Area

Wildlife Habitat Suitability Analysis
More Suitable
Less Suitable

Potential Wildlife Crossings
Least Significant
Most Significant

Miles
0 1 2

VT State Plane,
Meters, NAD 83

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Town of Cavendish

Town Plan

Adopted August 28, 2012

3. Support community-wide cultural events and activities.
4. It is important to the town to have a community elementary school.

Goal 4: **Promote and maintain a safe, convenient, economic, and energy-efficient transportation network that respects the integrity of the natural environment, as well as the historical and esthetic value of the existing roads.**

Objectives:

1. Improvement or expansion of public utilities and transportation should occur in existing corridors to encourage desired development patterns.
2. Alternative forms of transportation, such as walking, bicycling and public transportation should be encouraged.
3. Promote use of esthetically compatible options for guard rails on roads such as cable, rusted rail, or pressure treated wood.
4. Maintain the tree canopies and stone walls on the existing roads.

Goal 5: **To protect important natural and historic features of the Cavendish landscape, including woodland, wetlands, scenic sites, significant architecture, villages, wildlife habitats, view sheds, and agricultural land.**

Objectives:

1. Identify and include additional important resource areas on Future Land Use Map and develop a conservation plan to protect and preserve those features.
2. Encourage the renovation and preservation of historic buildings and structures.
3. Develop additional policies and plans for the long-term protection of significant scenic roads and highways, waterways, and views; cultural and historic resources; and important resources and recreation lands.
4. Prevent development within floodplains that will cause damage to natural or manmade resources.
5. Inventory and update the resources.

Goal 6: **To maintain and improve the quality of air, water, wildlife, and land resources.**

Objectives:

1. Insure development in areas of natural, cultural, and scenic significance is not detrimental to the resources of the town.
2. Protect and improve the water quality of the Town's rivers, lakes, streams, groundwater, and drinking water supplies.
3. Establish conservation measures for critical wildlife habitat.
4. Encourage the use of transportation systems that have minimal impacts on air quality.
5. Extraction of earth minerals and resources must ensure that land and water resources are minimally impacted and restored after extraction.

Goal 7: **To promote the efficient use of energy through conservation and encourage the use of renewable energy resources, such as solar, wind, hydro and biomass.**

Objectives:

1. Promote use of public transportation, ridesharing, non-motorized vehicles, and

pedestrian traffic. Emphasize connections between schools, stores, work, and home.
2. Ensure that the design, location, and maintenance of existing and future transportation systems are consistent with the land use patterns recommended in this Plan.
3. Promote alternative and energy efficient resources with residential development.
4. Encourage the concentration of energy-intensive facilities, housing, and other uses to avoid the expense of distributing energy over large geographic areas.
5. Promote the location of community service structures, retail sites, public utilities, day care centers, state offices, and other frequently visited sites within walking distance of residential areas.
6. Ensure that post offices remain in village centers.

Goal 8: **To maintain and enhance recreational opportunities.**

Objectives:

1. Develop and maintain recreation facilities and infrastructure to provide recreation opportunities for all residents.
2. Ensure the preservation of and access to important natural and scenic resource areas for recreational use.
3. Enact a capital plan for a local bike path.

Goal 9: **To strengthen agricultural and forest industries.**

Objectives:

1. Support Current Use Program for agricultural and forest lands.
2. Develop additional conservation plans to ensure that primary agricultural soils are devoted to farming or to such uses which will maintain the potential for agricultural use.
3. Forest and agricultural lands should be considered for their forest and agricultural productivity prior to any non-forest or agricultural uses.
4. Encourage businesses and industries that add value to locally produced agricultural or forestry products.

Goal 10: **To plan for, finance, and provide an efficient system of public facilities and services to meet present and future needs.**

Objectives:

1. Analyze current facilities and assess future needs to determine potential demands of infrastructure.
2. Enact a Capital Program and Budget Plan for public utilities and facilities.

Goal 11: **To encourage availability of safe and adequate housing for anyone choosing to live in the town of Cavendish.**

Objectives:

1. Housing should meet the needs of diverse social and income groups.
2. New and rehabilitated housing should be safe, sanitary, and coordinated with the provision of necessary public facilities and utilities.
3. The development of diverse and appropriate housing should be encouraged in the Town of Cavendish.

Plan Implementation

Successful implementation of the goals, policies and recommendations outlined in this Plan depends on the combined efforts of Town residents and local officials, as well as the resources of the Southern Windsor County Regional Planning Commission, and other regional, state, federal and private entities involved in land use planning activities.

At the state and federal levels, the Plan can be used to justify and prioritize the use of federal funds for community development, transportation improvements, natural resource protection and management, and other investments. In addition, Act 250 requires that developers show that projects conform to local and regional plans.

At the regional level, the Regional Planning Commission can review the Town Plan for compliance with the requirements of Act 200. Act 200 approval makes the Town eligible to apply for implementation funding from the State in the form of Municipal Planning Grants.

Interpretation of the Town Plan

The Cavendish Planning Commission recognizes that the Town Plan has regulatory effect only for projects which require an Act 250 permit (commercial or industrial projects on more than an acre, subdivisions of six or more lots, ten or more housing units, local state or municipal projects which disturb 10 or more acres of land, oil and gas drilling, and development over 2,500 feet in elevation). For purposes of Act 250 review, plan language that contains the words "shall," "must," "will," "ensure," "protect," "insure," "maintain," "improve," and "preserve" is mandatory language. The Town Plan maps are an integral part of the Town Plan.

At the local level, the Town has the following opportunities with respect to implementing the goals, objectives, and policies of the Plan:

1. Develop land use regulations that are based on the goals, policies and recommendations outlined in the Town Plan.
2. Develop specific ordinances to implement the goals, policies and recommendations outlined in the Town Plan.
3. Inform the community about opportunities to preserve Cavendish's rural character. Solicit community feedback through workshops and surveys.
4. Refer to the Town Plan when planning additions and improvements to local infrastructure such as local roads and public utilities. Such additions or improvements should be used to plan for appropriate growth and development.
5. Work with public and private entities to help them design development or resource management plans in ways that will further the goals of this Plan.
6. Work with area land trusts to develop a plan for conservation of important resource lands.
7. Work with the Department of Forests, Parks, and Recreation to update forest management plans for State forest lands in Cavendish.
8. Participate in Act 250 hearings to present evidence on the conformance or nonconformance of projects to the objectives, and policies of the specific sections of the plan.
9. Enhance and improve communication and interaction between the Planning Commission

and the community. Possible ideas are the development of a Planning Commission website and for the Planning Commission to be on the distribution listing for on-site wastewater permits, access permits and property transfers.

Relationship to Local and Regional Plans

In order for the Town of Cavendish to achieve its land use planning goals, the Town must evaluate the Town Plan in relation to plans of neighboring towns and the region. Cavendish is bordered by the towns of Ludlow, Reading, Weathersfield, Baltimore, and Chester and is located in the center of the Southern Windsor County Regional Planning Commission's 10-town region. Cavendish is served by the District 2 Environmental Commission, and is located in Vermont Agency of Transportation District 2, and shares borders with VAOT districts 3 and 4.

Neighboring Towns

Cavendish is surrounded by towns which share many similar planning concerns and are faced with varying degrees of development pressure. All of the towns surrounding Cavendish have town plans and zoning ordinances. None of these plans is in conflict with the Cavendish Town Plan.

Some neighboring towns share similar concerns to those in Cavendish with regard to development and traffic. The Town of Ludlow, for example, sees a significant increase in traffic flow during the winter months, due to the operation of major ski resorts in town and to the north. The expansion plans of Okemo Mountain Resort and Killington Resort will cause further increases in traffic through Ludlow, and likely through Chester and Cavendish as well, once they are implemented. The increase in truck traffic and truck size along Route 103 is also a shared concern amongst the towns of Ludlow, Cavendish and Chester.

According to the Southern Windsor County Regional Transportation Plan, Routes 131 and 103 identified as Regional Transportation Corridors. Route 131 has been designated as a State Scenic Highway within the town boundaries. Scenic designation of this road gives the Town a greater role in maintenance activities on the road within the town boundaries. The Town is also committed to ensuring development that requires an Act 250 permit must be compatible with and not have an adverse impact on this scenic Route 131 corridor.

The Town of Reading, to the north of Cavendish, has designated two parcels of land that border Cavendish as conservation land areas and one (around Knapp Ponds) as recreation on its Proposed Land Use map. These designations are compatible with the designations of land on the Cavendish Future Land Use map in this plan.

Southern Windsor County Region

The Southern Windsor County Regional Plan provides broad guidelines for planning, coordination and review of the natural, cultural, social and economic features of the Southern Windsor County region. The Southern Windsor County Regional Plan, Regional Transportation Plan and Regional Bicycling and Walking Plan are companion documents to the Cavendish Town Plan, providing a broader framework and context for local planning efforts. The Town Plan should support and complement the land use and development goals of these regional planning documents.

The 2003 Regional Plan identifies the villages of Proctorsville and Cavendish Village as "Town Centers," that are characterized by providing localized services, which may include shopping,

Energy Resources

Increased energy demands and the high cost to provide them are leading to efforts to conserve existing energy resources and to search for alternative solutions to energy problems. Environmental concerns such as air pollution and acid rain are directly linked with energy consumption. Combustion of fossil fuels results in the release of "greenhouse gases," and acid rain that has impacted many lakes and streams in the Northeast.

While the Town of Cavendish has not yet seen these direct negative impacts of energy consumption, there are some concerns that affect local residents. The costs of electricity are particularly high in Vermont. In addition, the cold climate requires additional forms of energy for heat such as fuel oil, propane, or wood. In order for residents to heat their homes more efficiently and effectively, there are a number of measures that may be considered during the planning and design stages of home development and rehabilitation. Recent state regulations require that all new homes meet certain standards of energy efficiency. These may include use of passive solar energy through home location, insulation, storm windows and fuel-efficient heating systems.

Proper land use techniques can be employed to achieve energy conservation. The siting of structures to maximize solar gain, proper slope orientation and the utilization of trees as wind barriers are all effective tools when designing for energy conservation. New development should incorporate these and other energy conservation measures.

The use of hardwoods for fuel consumption is a reasonable alternative to non-renewable sources because it is available locally and when used in a modern, clean burning stove does not pollute the atmosphere nearly as much as older technology stoves and burners. Harvesting of cordwood that is based on sound forest management plans does not degrade forests and streams. In addition, locally produced cordwood contributes to the local economy, creating jobs and keeping dollars within the community.

Other locally available renewable energy resources include biodiesel, wood pellets, wind and solar. Biodiesel can be used wherever petroleum-diesel is now used. It can be used in oil furnaces or oil fired hot water heaters. It can often be used in any vehicle or machinery that uses petroleum diesel with no modification to the engine.

Hydroelectricity is another form of energy that is produced within the Town of Cavendish. While hydroelectricity does not discharge harmful emissions into the air, dams must be constructed and operated in ways which minimize harmful effects on water supply and fish habitats in the town's rivers and streams.

Energy and Transportation

According to the 2003 Southern Windsor County Regional Plan, base forecasts for Vermont energy consumption indicate that total energy use is expected to increase 54% between 1990 and 2015. This increase is projected to be from growth in transportation, commercial and industrial energy use. In addition to promoting efficiency in home-building and heating, towns may encourage energy conservation through the design and use of transportation systems. Public transportation, ride sharing, and the development of bicycle and pedestrian facilities are all ways of reducing the number of cars on the roads and the amount of gasoline consumed. Planning that promotes commercial development in downtowns rather than along highway corridors, will encourage people to park and get out of their cars. The Town has addressed many of these issues further in the Transportation and Land Use chapters of this plan.

Policies

1. Promote the wise use and conservation of all energy resources by encouraging residents and business to take advantage of State and Federal programs designed to promote conservation and reduce energy consumption. This may include the investigation of potential solar and wind energy generation sites.
2. Support the Use Value Appraisal (Current Use) Program to stimulate cordwood production and improve forest management.
3. Encourage small scale, non-commercial alternative energy sources such as solar and wind power as long as they do not negatively impact aesthetics, ridge lines, or other natural and scenic resources.
4. Promote the development of a transportation system that encourages use of public transportation and ridesharing and enables increased non-motorized vehicle and pedestrian traffic. Emphasize links between schools, stores, work and home.
5. Encourage towns to ensure that the design, location, and maintenance of existing and future transportation systems are consistent with the land use patterns recommended in this Plan.
6. Encourage architects and builders to examine alternative energy resources in the design and construction phases of residential development.
7. Encourage the concentration of energy-intensive facilities, housing, and other uses to prevent the expense of distributing energy over large geographic areas.
8. Encourage the location of community services, retail sites, public utilities, day care centers, state offices, post offices and other frequently visited sites within walking distance of residential areas.

Recommendations

1. Provide residents with information concerning methods of reducing energy consumption in the home (such as weatherization, upgrading of energy-efficient appliances, etc.) and the use of alternative energy resources.
2. Provide information regarding new energy efficiency standards required by the Vermont Department of Public Service to home-builders and local residents.
3. Encourage the use of renewable energy resources whenever possible and explore local tax incentive programs for renewable energy power generation.

where they can function. These areas should be reserved for industrial development or resource extraction and managed to minimize traffic, environmental, and aesthetic impacts on surrounding areas.

Rural Residential

Rural Residential areas can support a number of different uses, including low density residential, forest, agricultural (including tree farms and other horticultural uses), open, and transitional (scrub/shrub). They have been designated based on their current use and accessibility from existing roads. Rural areas shall allow only compatible uses, and maintain existing, low-density settlement patterns. Sprawl and strip development shall be avoided and cluster development shall be incorporated, as long as the overall density remains low. Open space and recreational resources should be preserved wherever possible. New residential development may occur in Rural Residential areas only where accessible by existing town roads.

Recreation

Public and private indoor and outdoor recreation opportunities are a vital part of the Town's economy and quality of life. Publicly accessible recreation opportunities shall be enhanced where possible, and measures taken so opportunities are not diminished. Designated recreation areas shall retain their recreational value to the public; where development would reduce these recreational opportunities, alternatives shall be provided. Conservation areas provide recreational use and shall be valued as such.

Agriculture

Agricultural land has historically been important to the Town's economy, food supply, and cultural heritage. It contributes to the land use patterns and aesthetic qualities that make the Town a desirable place to live, work, and visit. Land in agricultural use and idle open land with agricultural potential possess these values. The potential for agricultural use and production shall not be impaired in designated agricultural areas. Cluster development shall be incorporated in these areas for the preservation of open lands.

Forest

The majority of undeveloped land in Cavendish is forested. The State owns much of this land and manages it for forestry and wildlife habitat, while allowing recreational uses. The contiguity of large areas of forestland is important for many types of wildlife, especially for large mammals such as deer, bear, and moose. The State Agency of Natural Resources has identified several large areas within the town as deer wintering areas and bear habitat. Any development which occurs in forest areas should be designed so that these important habitat areas are maintained wherever possible. Forest areas are also important for their recreational, aesthetic, and economic resource values. The ability of Forest areas to provide these benefits shall not be impaired. Development in these areas shall be undertaken in ways that protect their value and ensure the continued presence of healthy forest ecosystems in the Town. Cluster development shall be incorporated in these areas for the maximization of forest preservation.

Conservation

Conservation areas are lands that possess outstanding value or potential as wildlife habitat, recreation areas, educational resources, fragile natural areas, economic assets (generating revenue from recreation and tourism), or aesthetic resources. Conservation lands represent relatively pristine areas of the Town that residents wish to preserve in their natural state for future generations, and should receive the highest level of protection from development. Special care should be taken in any resource management or extraction plans to maintain the character and value of these areas. Conservation areas are especially beneficial when surrounded by

compatible uses such as forest and agriculture.

Special Considerations

There are several important resources that may occur within any of the land use categories above, and which merit special attention and protection. They include: Public Water Supply Source Protection Areas; floodplains, vegetated areas next to surface waters, wetlands, the Black River and corridor, Natural Heritage Inventory sites, critical deer wintering habitat and bear habitat as defined by the Vermont Agency of Natural Resources, regionally significant historic sites, and other locally defined sensitive natural areas and scenic resources. Development should avoid and minimize negative impacts to these resources. In addition, special considerations should be observed in the following areas:

High elevations and steep slopes — At high elevations (greater than 1,500 feet) the soil tends to be thinner and cooler and less able to support a wide range of plant life. If areas are disturbed the potential for severe erosion is great. Land at 1,500 feet and above as well as lands with steeps slopes (greater than 25%) shall be protected from any development which will cause soil erosion.

Ridgelines — Any development which is proposed at higher elevations shall demonstrate that every measure has been taken so that the development is not visually obtrusive to surrounding neighbors or from public roadways.

While residential development may be expected in almost all land use categories, higher densities should be concentrated in and around established village areas. Residential development should be compatible with the land use and housing goals of this plan, and should not conflict with the values defined in the land use categories of this plan.

Pace of Growth

Cavendish is a rural community, and residents wish to maintain this character with the historic and well-paced pattern of growth. Sudden large increases in population and/or physical development which would place an undue burden on Town facilities and have a negative impact on the town and village character should be discouraged.

Policies

1. Any proposed development shall not place an undue burden upon Town facilities or services. If it is shown that the additional property taxes would not cover the additional burden placed on Town services, imposition of impact fees shall be considered.
2. Preserve the historical development pattern of mixed-use urban and village areas surrounded by open land, agriculture, forest, and low-density residential use.
3 Direct growth and development toward areas of the Town where it will be most effective and efficient to provide the necessary public infrastructure and services.
4. Establish land uses and land use patterns that protect and enhance the values defined in this chapter.
5. Revitalize, maintain and reuse historic structures and other existing buildings in village centers whenever possible.
6. Commercial development that occurs outside the village centers shall not contribute to strip development. Access management and innovative commercial development that maintains the characteristics of existing villages is encouraged.
7. In order to maintain the existing settlement patterns, higher density residential, commercial, and compatible industrial development shall be located in village centers.

Plan For the Northwest Region 2007 – 2012

Effective October 3, 2007

The cost of child care can be a deterrent for families seeking safe and convenient services. The Vermont Agency of Human Services has established the Child Care Subsidy Program, which bases eligibility for state subsidies on gross monthly income and family size. For example, a family with three members and a gross monthly income of $1,157 is eligible for a 100-percent child-care subsidy. While this subsidy begins to address affordability issues for low-income families, middle-class families are not eligible for financial assistance.

In general, the State's regulations of child-care providers require that providers meet basic standards for children's health and safety. Some programs choose to achieve a higher standard of service recognized by accreditation by a national program. National accreditation exists for registered child care providers, licensed programs, and school-age programs. In addition, the State of Vermont recently introduced a rating system that goes beyond the basic standards set by the State's regulations.

Table 4.11 CAPACITY OF CHILD CARE PROGRAMS IN FRANKLIN & GRAND ISLE COUNTIES

Town	Registered Child Care Home (Capacity)	Child Care Centers (Capacity)	Total Capacity
Grand Isle County	**126**	**95**	**221**
Alburgh	54	34	88
Grand Isle	36	26	62
Isle La Motte	12	0	12
North Hero	6	0	6
South Hero	18	35	53
Region Total	**1,074**	**1,222**	**2,296**

Source: Agency of Human Services, Social and Rehabilitation Services. Last updated March 2004.

Table 4.12 ESTIMATED NEED & SUPPLY OF CHILD CARE SERVICES IN CHITTENDEN COUNTY

	Estimated Need (2000)	Estimated Supply (2004)
Franklin County	7,909	2,075
Grand Isle County	948	221
Region	8,857	2,296

GOALS, POLICIES & OBJECTIVES

GENERAL GOALS:

4.1 To insure that the region's infrastructure has adequate capacity to meet current needs and planned growth in a timely and cost-effective manner.

4.2 Develop and maintain communication and cooperation between public, private, governmental and industry representatives, in order to promote and foster appropriate infrastructure planning and development.

POLICIES:

4.1 Growth and development should occur in accordance with long-range community facility plans and capital budgets designed to provide needed capital improvements and infrastructure in the most efficient and effective manner possible.

4.2 The region will support only those development proposals that are within the existing or planned capacity of public utilities, facilities and services.

4.3 Growth should be targeted according to the following schedule:

1. First to those areas within designated growth centers currently served by existing utilities, facilities and services with adequate capacity;
2. Secondly to areas within designated growth centers adjacent to existing service areas with adequate capacity.

4.4 Industrial development should be targeted to designated industrial areas with adequate infrastructure and which are within or adjacent to designated growth centers.

4.5 The NRPC supports development of a system of regional and local infrastructure that promotes the land use goals and vision statement contained in this plan and in duly adopted municipal plans.

4.6 Creative inter-municipal and public/private partnerships that promote cost-saving and cost-sharing in the provision of infrastructure should be encouraged.

4.7 Public and private investments that would overburden local or regional infrastructure and services will be discouraged.

4.8 Improvements to utility infrastructure should be timed to coordinate with other utility and/or road improvements planned in the same area if doing so will reduce the costs associated with the project.

4.9 Whenever feasible utilities should share rights-of-way and /or easements.

4.10 Utility rights of way and public investment should be planned so as to minimize environmental, cultural and environmental impacts, particularly seeking to minimize development pressure on agricultural and forest lands.

4.11 Utility lines should be buried when crossing locally or regionally designated historic, cultural and scenic areas or otherwise be strategically located to minimize adverse impacts on these resources.

4.12 Utility rights of way should not traverse resource and conservation lands including, but not limited to, agricultural lands.

4.13 Development or maintenance of utility systems or facilities that result in or create an undue adverse impact on municipal services, natural resources and/or other unique features shall be discouraged.

OBJECTIVES:

4.1 Provide updated materials on capital planning to municipalities as requested and be available to contract for more detailed work as needed.

4.2 Participate in reviews of development projects in state regulatory proceedings.

4.3 Develop an information system that fosters coordination and communication between organizations within the region, and between local municipalities, state and federal agencies regarding developments that affect municipal facilities, services and objectives.

4.4 Provide information and assistance to municipalities regarding state and federal laws affecting municipal utilities, facilities and services.

4.5 Encourage municipalities to share information, staff, and equipment where feasible and beneficial.

4.6 Inform and assist municipalities in identifying financing opportunities and grants that will enable them to address local capital needs.

4.7 Maintain a library of regional information accessible to member municipalities and residents.

4.8 Provide assistance to local planning commissions in developing municipal plans that encourage land use patterns that optimize the use of existing utilities, facilities and services and which reduce the cost of providing future utilities, facilities and services.

WATER SUPPLY GOAL:

4.3 To insure that water systems are not contaminated, depleted, or degraded, that drinking water sources do not contain harmful contaminants and that there is sufficient quantity of water available for existing and anticipated recreational, residential, commercial and industrial needs.

Local zoning bylaws may also permit the creation of planned unit developments (PUD). These are a grouping of mixed use or residential structures, preplanned and developed on a single parcel of land. The setback, frontage, and density requirements of the zoning district may be varied, in consultation with the town planning commission, to allow creative and energy efficient design (i.e. east-west orientation of roads to encourage southern exposure of structures, solar access protection, use of land forms or vegetation for windbreaks, and attached structures).

Subdivision regulations govern the creation of new building lots, as well as the provision of access and other services and facilities to those lots. Subdivision regulations, like the PUD, involve the town planning commission or development review board in the design process. As with the PUD, the planning commission should use the opportunity to ensure that the conservation of energy is considered in subdivision development.

Except through the Act 250 process, there is no regulation of energy use in new construction in the Northwest Region. Act 250 requires that "best available technology" for energy efficiency and recovery be used in construction. In its review of development proposals, Act 250 applies to life cycle cost test to determine the "appropriate level" of energy efficiency. The "appropriate level" requires the developer to invest in energy efficiency up to the economic break-even point for a particular structure, occupant, and usage pattern. This standard allows for flexibility in design without sacrificing the energy efficiency of specific measures.

GOALS, POLICIES & OBJECTIVES

GENERAL GOALS:

6.1 Encourage conservation and efficient use of energy thereby saving the Region's financial resources and the world's energy resources.

6.2 Seek to incorporate the full costs of energy use in decision making.

POLICIES:

6.1 In the evaluation of all energy projects, those with the least adverse environmental, aesthetic, economic, and social impacts are preferred.

6.2 A broad range of options that could meet energy needs should be considered when evaluating energy-related projects, including conservation, efficiency and education, and those with the least adverse environmental, aesthetic, economic, and social impacts evaluated in the short and long term should be supported.

6.3 Efforts that reduce the energy demanded for transportation should be supported.

6.4 Efforts that reduce the emission of pollutants from energy production and/or consumption, particularly greenhouse gases and contributors to ozone depletion, should be strongly supported.

6.5 Promote least cost planning, or life cycle costing, which considers all costs of energy production and use, including environmental and social costs, from the origination of inputs to the disposal of outputs.

6.6 Generation, transmission and distribution lines or corridors should avoid adverse impacts on significant wetlands, plant and animal habitat, and recognized historic, natural, or cultural resources.

6.7 Support building standards that promote energy-efficiency.

OBJECTIVES:

6.1 NRPC should work with municipalities to develop an energy element for the municipal plan, which, if implemented, will result in energy savings to the community.

6.2 NRPC should assist in review of proposals for new energy sources or facilities to evaluate the economic, social, scenic and environmental costs.

6.3 NRPC will continue to review and/or participate as a statutory party in Public Service Board Section 248 applications for a Certificate of Public Good.

POLICIES:

6.8 Promote longterm ecological management and sustainable use of renewable energy resources in the Region.

6.9 Encourage locally produced renewable energy sources which create local jobs, stimulate investment in the Region, and have minimal environmental impact.

6.10 Encourage research and production of on-farm production of biomass for energy, with reasonable caution given to the introduction of invasive species and production of unmanageable wastes.

6.11 Support and encourage the development of energy systems that utilize locally produced biomass and gaseous by-products, such as the methane released by area landfills, industry wastes, and manure pits, for local and regional energy consumption.

6.12 Reduce the consumption of non-renewable energy resources.

6.13 Promote the redesign or retrofitting of existing hydroelectric power systems to improve efficiency and reduce environmental damage.

6.14 Promote hydroelectric power systems that do not disrupt riverine ecology.

6.15 Support and encourage communities to enable appropriately sited and scaled wind energy systems.

OBJECTIVE:

6.4 In the review of utility, industrial and commercial projects, NRPC should promote the incorporation of co-generation as an energy source wherever possible.

LAND USE GOALS:

6.3 Encourage energy efficient and energy conserving patterns of land use.

6.4 Increase use of energy conservation practices in site planning and development at the local and regional level.

POLICIES:

6.16 Growth should be clustered in areas served by existing infrastructure, with priority given to growth that occurs in designated growth centers.

6.17 Commercial strip development along transportation corridors should be discouraged in favor of clustered development.

6.18 Infill development that builds on land between existing nearby buildings should be encouraged.

6.19 Concentrate housing, employment and social services to reduce the demand for transportation.

6.20 Building should occur on south-facing slopes and be oriented toward the south to reduce heating costs.

6.21 Landscaping and topography should be used to minimize building heating and cooling needs.

6.22 Plans for generation, transmission and distribution lines should incorporate the following design principles:

1. Rights of way shall not divide land uses, particularly agricultural lands and large contiguous forest parcels.
2. Geographic features should be used to minimize the visual impacts of corridors. Corridors, lines and towers should not be placed on prominent geographic features such as ridge lines and hilltops.
3. Placement and maintenance of utility lines should minimize the removal of vegetation and the disruption of views from public highways, trails and waters.

6.23 Encourage the private sector to develop energy conservation and renewable energy technologies.

6.24 Support financial incentive packages for or the act of retrofitting existing or developing new housing stock with more energy efficient materials.

6.25 Encourage and assist municipalities to adopt land use ordinances that facilitate energy conservation and reduced energy consumption.

OBJECTIVES:

6.5 NRPC will review projects to promote energy efficient land use planning and construction.

6.6 NRPC will review Act 250 applications to ensure energy efficiency site planning.

6.7 NRPC will encourage municipalities to adopt standards for review which include energy efficient standards related to land use and site development.

INFRASTRUCTURE GOAL:

6.5 Develop a system of infrastructure that promotes energy conservation, substitution of low-impact renewable energy sources for non-renewable sources, and which provides sustainable, reliable, and affordable energy for the region.

POLICIES:

6.26 Projects that create and improve pedestrian and bicycle transportation are strongly encouraged.

6.27 Encourage projects with substantial regional impact to use energy efficient lighting and heating systems in their design.

6.28 Alternatives to the private automobile should be encouraged, and provided for in every plan for large-scale development, particularly those remote from other employment or residential centers.

6.29 Park and ride lots should be encouraged, permitted and developed at logical locations within the region.

6.30 Developers of commercial and industrial projects should be encouraged to use fewer and smaller parking spaces and lots and encourage the use of energy-saving alternative means of transportation such as providing reserved spots for car/van pool parking, bike racks, safe pedestrian circulation, and where warranted, transit stop locations.

OBJECTIVES:

6.8 Provide technical assistance and support to local municipalities seeking to promote land use patterns that encourage energy conservation, including transportation alternatives such as bike trails, sidewalks, and public transit; and which promote settlement patterns that encourage energy conservation.

6.9 NRPC should work with communities to establish incentives for developers to accommodate alternative transportation possibilities in their plans and with employers to encourage their employees to reduce reliance on the single occupancy vehicle.

Master Planning

Master plans are useful on a project, corridor, or district basis and outline comprehensive plans for full buildout and design of a particular area. A master plan is more focused and detailed than the municipal plan and generally should include a combination of graphic site plans, inventory and needs analyses, project costs priorities and phases, market analysis, and funding opportunities, as applicable (Growth Center Planning Manual for Vermont Communities, 76). Master planning can further smart growth principles by planning for transportation and pedestrian circulation, infrastructure, and appropriate use, size and designing of buildings, amongst other issues, prior to development of the plan area. A master plan is an important tool to effectively implement planning goals and reduce negative impacts related to development.

Text Box 7.5

MASTER PLANS MAY INCLUDE ONE OR MORE OF THE FOLLOWING ELEMENTS:

- the use of and rehabilitation of existing public buildings or spaces;
- the location of new or expanded public buildings or spaces;
- design criteria and/or building envelopes for expanded or new buildings;
- improvements to and expansions of the transportation network including roads, sidewalks, trails, greenways and parking;
- streetscape improvements and traffic calming techniques;
- or recreation facilities and public open space.

~ ~ ~

(Growth Center Planning Manual for Vermont Communities, 76)

Municipal Water and Sewer Infrastructure Planning

Lack of municipal sewer and water is one of the main inhibiting factors to density in the regions village and hamlet centers. An adequate on-site septic design usually necessitates at least 1 acre of land, if not more, depending on soil type, limiting density even if minimum lot size does not. However, planning and financing a system commonly takes in excess of five years from concept, feasibility, design, and construction and is very costly. NRPC is available to assist municipalities with the planning process and in securing financing. In the mean time, encouraging community septic systems in and around village centers will allow for higher densities.

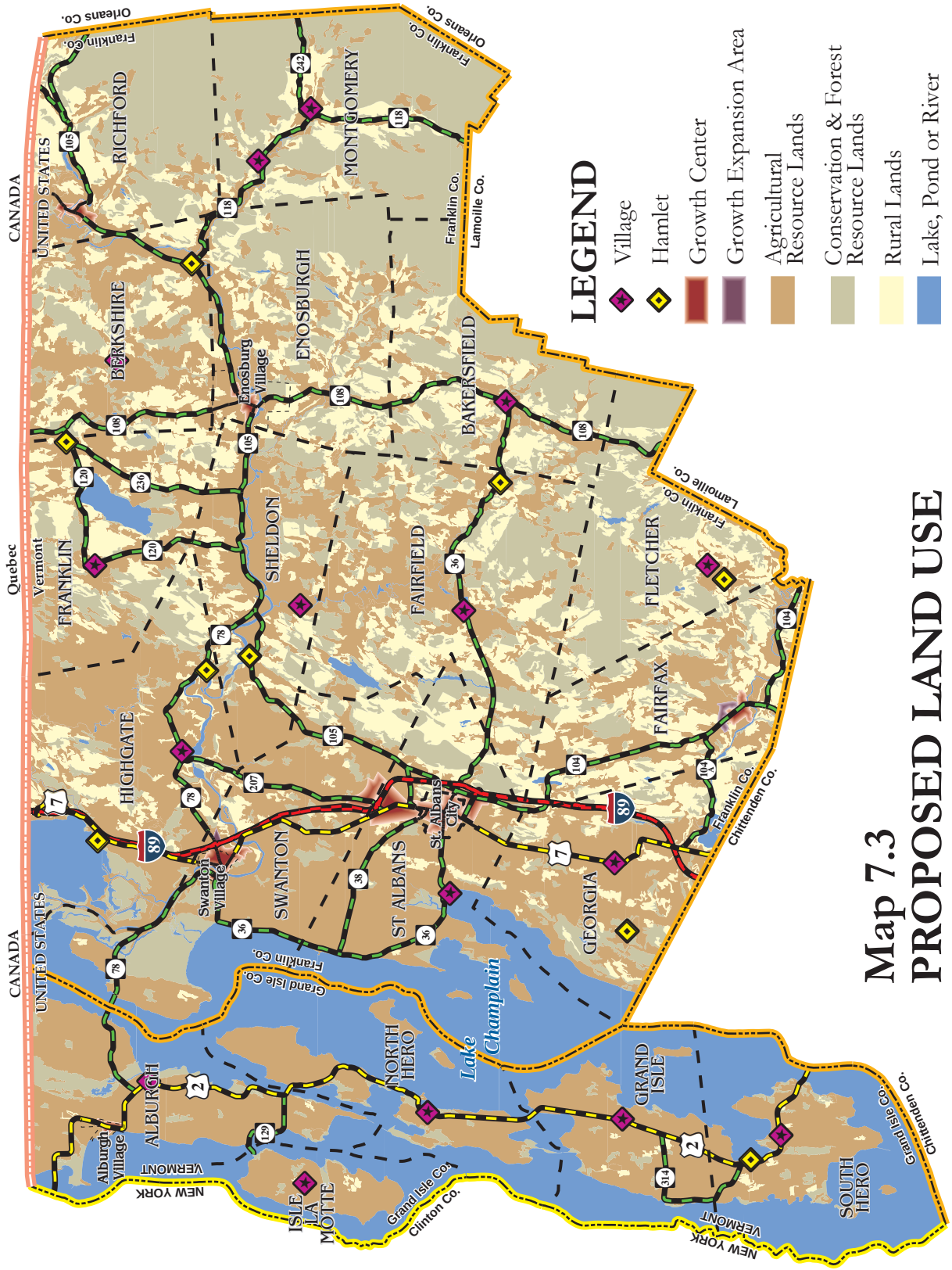
PROPOSED LAND USE

NRPC has divided the region into several proposed land use planning areas to encourage the conservation of valued resources and a development pattern that will maintain the character and quality of life important to this region. These planning areas are illustrated on the Proposed Land Use Map on the next page (Map 7.3). The categories include Agricultural Resource Lands, Forest Resource Lands, Conservation Resource Lands, Low-Density Development Areas, Growth Centers, and Sub-Regional Growth Centers. In addition, NRPC has identified villages, hamlets, and transitional growth planning areas. It is important to note that these planning areas are regional planning tools, not regulatory zoning districts. When reviewing land uses for conformance with this plan, emphasis will not be placed on whether the use is located entirely within or just outside a particular area, but on the impact that the land use will have on underlying resources and how the use will affect the intent and function of the particular land use planning area.

Land Use Planning Areas

Agricultural/Resource Lands

Agricultural Resource Lands represent the best farmland in the region and should be given the highest level of support for their continued use as agricultural lands. Nearly 39% of the region is included in this category, reflecting the significant acreage of prime agricultural soils and the large number of farms in the Northwest. Strategies that support the long-term protection of these lands from conversion to non-agricultural use (as listed earlier in this chapter in textbox 7.1, 7.2, and 7.3) should be sought out and implemented. Recognizing the importance of farming to the region's character and economy, and also recognizing that existing farms may occupy some good farming


LEGEND
Village
Hamlet
Growth Center
Growth Expansion Area
Agricultural Resource Lands
Conservation & Forest Resource Lands
Rural Lands
Lake, Pond or River
Map 7.3
PROPOSED LAND USE
CANADA
UNITED STATES
Quebec
Vermont
Orleans Co.
Franklin Co.
Lamoille Co.
Chittenden Co.
Grand Isle Co.
Clinton Co.
NEW YORK
VERMONT
Lake Champlain
FRANKLIN
HIGHGATE
SWANTON
Swanton Village
BERKSHIRE
RICHFORD
ENOSBURG
Enosburg Village
MONTGOMERY
SHELDON
FAIRFIELD
BAKERSFIELD
FLETCHER
FAIRFAX
ST ALBANS
St. Albans City
GEORGIA
ALBURGH
Alburgh Village
NORTH HERO
GRAND ISLE
SOUTH HERO
ISLE LA MOTTE

lands that would otherwise be categorized as Conservation Lands, Agricultural Resource lands were given precedence over the Conservation Lands designation. For example, if a particular area has characteristics of both Agricultural Resource Lands and Conservation and Forest Resources Lands as listed in Text Box 7.6, the area would be characterized as Agricultural Resource Lands.

Text Box 7.6

REGIONAL PLANNING AREA CRITERIA

Agricultural Resource Lands
- Farmed Prime Soils > 20 acres
- Farmed Non-Prime Soils > 20 acres
- Unfarmed Prime Soils (negligible acreage)

Conservation Lands
- Wetlands > 5 acres
- 100 Year Floodplain
- Uplands (> 1,000' elevation)
- Public Lands
- Shore land (< 500' from waterline)
- Everything from "moderate to severe" on suitability map
- Prime Forest Soils with Forest Cover >20 acres

Rural Lands
- All lands not otherwise designated

Growth Centers
Sub-Regional Growth Centers
Villages
Hamlets
Transitional Growth Areas

Conservation and Forest Resource Lands

Conservation and Forest Resource Lands, amounting to 25% of the region, include a variety of land types generally not suitable for development and lands that are particularly well-suited for tree growth. Land in this category should usually not be developed. Development may be limited due to natural resource constraints, such as wetlands and floodplains, wildlife and scenic values in the case of uplands, or an overall low suitability towards development based on the regional development constraints analysis discussed above.

Secondly, development may be inappropriate due to the value of the forest resource value of the lands. Ridgelines and hilltops contribute significantly to the beauty of the region and development in these areas can have widespread significant negative impacts. Use of these lands should include a mix of forest and conservation uses including maple syrup production, logging, appropriate agricultural operations, wildlife habitat, and recreation. These lands should be protected from fragmentation and conversion with the tools listed earlier in this chapter in textbox 7.1, 7.2, and 7.3.

Rural Lands

A relatively small amount of the region's growth is anticipated in the Rural Lands, occupying 16% of the region. Cluster development, such as planned unit developments and other methods that conserve open space, common land, and/or farmland useful for its intended purpose are encouraged in these areas, particularly in situations where developers plan to build numerous units. Methods of creating useful open space, common land, or farmland include but are not limited to ensuring the land is appropriate and of value for the intended use, locating it adjacent to other open spaces in similar use, or requiring a management plan. It is expected that much of the growth in rural areas will be single family homes. Areas included in this category require particularly careful planning to insure that strip development and sprawl are minimized and the goals for the other land use areas are promoted.

Regional Growth Centers and Sub-Regional Growth Centers

This Regional Plan recognizes one (1) regional growth center and five (5) sub-regional growth centers in the Northwest region (see Map 7.4). St. Albans City and areas in Albans Town by Exits 19 and 20 of Interstate 89 comprise the regional growth center. The five sub-regional growth centers include areas within the four incorporated villages (Swanton, Enosburg Falls, and Alburgh), and the village areas of Richford and Fairfax. Growth centers were chosen for their capacity to accommodate greater levels of economic and social activity than other areas in the region. Only the St. Albans growth center was found to have the scale and capacity to serve the entire region. The sub-regional growth centers are expected to serve as economic and cultural hubs for surrounding towns. The six growth centers are located within municipalities that have expressed the desire for managed, high density, mixed use development.

RURAL LANDS POLICIES:

7.24 A relatively small portion of the region's development should be located in rural areas on sites that present only slight limitations for development.

7.25 Development in these areas should not diminish the viability of agricultural operations or fragment large contiguous tracts of woodland.

7.26 Development is encouraged to be built outside of farms and along the edges of forests, preferably with buffers between such development and agricultural uses or environmentally sensitive areas.

7.27 Development that diminishes the rural character of the area as defined by local and regional plans is discouraged.

AGRICULTURAL RESOURCE LAND GOALS:

7.7 To promote agriculture, including farming, forestry, fishing and sugarmaking, as the primary land use in the region.

7.8 To ensure that the loss of prime agricultural soils and active farmland will be limited to the greatest degree possible.

AGRICULTURAL RESOURCE LANDS POLICIES:

7.28 Agricultural activities should meet Accepted Agricultural Practices and should seek to practice Agricultural Best Management Practices as defined by the Vermont Dept. of Agriculture.

7.29 Agricultural activities that are within the assimilative capacities of the soil, air, and water of the region are strongly supported.
Encourage not only the viability of individual farms but also maintenance of a sufficient density of farms in an area to encourage the provision of affordable farm services.

7.30 Strongly discourage land uses that pose a significant risk of contaminating agricultural resources, including soil and water, that would limit the viability for farming in the future.

7.31 Strongly support the right to farm for agricultural operations that meet acceptable agricultural practices.

7.32 Strongly discourage fragmentation of agricultural lands that reduce their economic or agronomic viability for farming through subdivision or development.

7.33 Support the use of innovative agricultural land conservation strategies including but not limited to transfer of development rights, purchase of development rights, fee-simple purchase of agricultural lands, and use value tax assessment.

7.34 Encourage municipalities to incorporate agricultural land inventories into their town plans.

7.35 Encourage developers to conserve agricultural lands and develop land use plans that both maintain economically and agronomically viable farmlands and which also consider features that encourage farming such as access, buffer strips, and storage of farm equipment.

7.36 Support the use of density incentives to encourage developers to incorporate designs supportive of agriculture.

7.37 Local businesses that add value to agricultural products grown in Vermont should be encouraged and sited to minimize conflicts with neighboring land uses and reduce negative impacts on environmental quality.

7.38 Consider the impact of new infrastructure on agriculture and support those projects that enhance the agricultural economy and discourage those projects that diminish the prospects for agricultural development.

7.39 Review of development proposals that reduce the viability of agricultural operations should consider secondary impacts in analysis of the project, including, but not limited to secondary economic impacts including farm

7.40 support services and local businesses, impacts on wildlife and recreation, and the cumulative impact of growth.

AGRICULTURAL RESOURCE LANDS OBJECTIVES:

7.10 Assist municipalities and community groups seeking funding or technical assistance in farmland preservation efforts.

7.11 Develop a Land Evaluation and Site Assessment (LESA) system that can be used in the region to identify and prioritize agricultural lands.

7.12 Support agricultural economic development efforts .

7.13 Develop technical assistance materials for municipalities wishing to encourage and support agriculture in their municipal plans and zoning by-laws.

CONSERVATION AND FOREST RESOURCE LANDS GOALS:

7.9 Maintain a healthy, diverse, interconnected and extensive forested area in the region that preserves and expands native wildlife habitat while also supporting a sustainable and prosperous forestry and forest-products industry.

7.10 To conserve, maintain and improve wildlife habitat on both public and private lands.

7.11 To protect endangered and threatened species and their habitat.

7.12 To minimize development in areas designated conservation areas on the proposed land use map.

7.13 To minimize fragmentation of conservation lands.

CONSERVATION AND FOREST RESOURCE LANDS POLICIES:

7.41 Discourage liquidation of forest resources, particularly operations that encourage conversion of forest land to other uses or which do not adequately plan for the regeneration of the forest within a reasonable time frame.

7.42 Encourage forest harvesting operations that follow guidelines for Accepted Forestry Practices developed by state agencies.

7.43 Discourage extension of permanent roads, energy transmission facilities, and utilities into Forest Resource Lands.

7.44 Encourage value-added forest-product industries to locate in the region.

7.45 Wildlife corridors should be protected from fragmentation and uses that reduce their viability for movement of wildlife, particularly where they join large contiguous tracts of land.

7.46 Development on wetlands, steep slopes, and ridge lines should be avoided.

7.47 Encroachment of development on wetlands is discouraged.

7.48 Development in areas with poor soils for septic treatment should be avoided unless connections to an existing wastewater treatment facility are provided.

7.49 Development along lakeshores and watercourses should occur only if it is demonstrated that runoff, erosion, and wastewater can be managed so as to avoid contamination of the water.

7.50 Development closer than 100’ from the mean high water mark is strongly discouraged.

7.51 Development that occurs between 100’ and 500’ from the mean high water mark should demonstrate that it will not have an adverse effect on water quality or wildlife corridors.

7.52 Development further than 1,000’ from road centerlines is generally discouraged unless doing so furthers the conservation goals above.

Lands, Conservation and Forest Resource Lands and Rural Lands. The Town of Georgia in Franklin County abuts this area and has a relatively concentrated existing settled area in this vicinity. The CCRPC's definition of an Enterprise Planning Area states that they "provide places for a single major employer or a concentration of employers that are likely to attract workers from the County and multi-county region. Development in these Planning Areas is to be locally planned and managed to minimize adverse impacts on surrounding planning areas. The Enterprise Planning Area has a potential for hosting land uses that may result in negative impacts on valuable farmland and burden utilities and facilities in Georgia and adjoining towns. If this happens it will be in opposition to the NRPC's policies supporting the protection of farmland and its objective of assisting towns, and particularly the Town of Georgia, in establishing growth centers and preventing sprawl. NRPC will continue to work with the CCRPC, the Town of Milton and the state to resolve these growth issues.

Lands further to the east in Milton and Westford have been designated by CCRPC as Rural. Development is limited in this area, which is compatible with the NRPC's designation of Conservation Lands interspersed with Agricultural Resource Lands along the Lamoille River.

The **Lamoille County Regional Planning Commission (LCPC)** adjoins the southeastern corner of the Northwest Region, along the town borders of Fairfax, Fletcher, Bakersfield and Montgomery, with Cambridge, Waterville and Belvidere in Lamoille County. While the LCPC's 2002 regional plan does not specifically designate growth centers, it contains a land use map showing "future potential growth areas that may have a potential regional impact." The largest of these is along the Rt. 104 corridor leading into Fairfax. If this area were to sprawl and grow along Rt. 104, the impact on Fairfax and Fletcher could be substantial. The LCPC's land use policy statements supporting the conservation of farmland and forest lands, along with their policy against strip development along transportation corridors suggests that they will act to prevent sprawl in this area. The NRPC will continue to work with LCPC to coordinate planning for this area.

The **Northeastern Vermont Development Association (NVDA)** adopted its current regional plan in 2006. The NVDA region adjoins the northeastern border of the NRPC. The NRPC towns of Richford and Montgomery abut the NVDA member towns of Jay, Westfield and Lowell. NVDA identifies development areas on their Future Land Use Map. Village Centers are identified within Westfield and Lowell, while a Service Center is identified in Jay. None of these three development areas are less than 10 miles from the Franklin County border. The NVDA plan encourages growth to concentrate in these areas, a strategy consistent with this plan. NVDA also recommends little commercial or industrial development in rural agricultural and forest areas. While it does not specifically discourage residential development in forest and agricultural areas it suggests that development in these areas should be limited, and does explicitly discourage strip development. As the adjoining area between NRPC and NVDA is primarily the wooded and steep Green Mountains, residential growth is not likely to be a significant problem.

Compatibility with Title 24 V.S.A. Chapter 117

The regional plan must be consistent and compatible with the requirements outlined in the state's land use planning law. Thirteen statutory goals are outlined in §4302 and are listed below, followed by sections of the plan where corresponding goals and policies may be found. The sections listed below highlight chapters with policies addressing these goals; additional goals and policies that reinforce those listed below are likely to be found in other chapters.

1. To plan development so as to maintain the historic settlement patterns of compact village and urban centers separated by rural countryside.

The chapters Regional Profile, Transportation, Land Use and Utilities and Facilities address settlement patterns by supporting regional and sub-regional growth centers, by directing infrastructure to support the historic pattern of development, and by supporting sustainable farming and forestry endeavors.

2. To provide for a strong and diverse economy that provides satisfying and rewarding job opportunities and

that maintains high environmental standards, and to expand economic opportunities in areas with high unemployment or low per capita incomes.

The Regional Profile and Land Use chapters contain goals and policies supporting economic development strategies that encourage a diversity of good quality, secure jobs in the region. Sub-regional growth centers are located throughout the region and are intended to encourage employers to locate in those areas, reducing regional unemployment and raising per capita incomes. Support for agricultural development and natural resource based industries further encourages economic development in rural areas. Mapping existing and future industrial and manufacturing sites is an objective in the Land Use chapter.

Environmental standards are addressed throughout the plan, with particular emphasis in the chapters on Natural and Cultural Resources, Land Use and Energy.

3. ***To broaden access to educational and vocational training opportunities sufficient to ensure the full realization of the abilities of all Vermonters.***

The Utilities and Facilities chapter contains goals and policies that encourage continued support and expansion of high quality, life-long education for all residents of the region.

4. ***To provide for safe, convenient, economic and energy efficient transportation systems that respect the integrity of the natural environment, including public transit options and paths for pedestrians and bicyclers.***

Transportation policies that address this goal may be found in the chapter of that name. These goals and policies are reinforced in the Utilities and Facilities, Energy, Housing and Land Use chapters.

5. ***To identify, protect and preserve important natural and historic features of the Vermont landscape.***

6. ***To maintain and improve the quality of air, water, wildlife and land resources.***

Goals #5 and #6 are addressed in detail in the Natural and Cultural Resources chapter. Supporting goals and policies are included in the Energy, Utilities and Facilities and Land Use chapters.

7. ***To encourage the efficient use of energy and the development of renewable energy resources.***

The Energy chapter contains the most extensive discussion of this goal and includes detailed goals and policies supporting energy conservation, reduced emissions from energy consumption and support for renewable energy. Other chapters with supporting goals and policies include Housing, Land Use and Utilities and Facilities.

8. ***To maintain and enhance recreational opportunities for Vermont residents and visitors.***

Recreational opportunities are discussed in the chapters on Natural and Cultural Resources and Utilities and Facilities. Supporting goals and policies are included in the Transportation and Land Use chapters.

9. ***To encourage and strengthen agricultural and forest industries.***

Continued support for agriculture and forestry can be found in the goals and policies of the Regional Profile, Land Use, and Natural and Cultural Resource chapters. The Energy chapter's goals supporting the development of the region's energy biomass resources further supports these sectors.

10. ***To provide for the wise and efficient use of Vermont's natural resources and to facilitate the appropriate extraction of earth resources and the proper restoration and preservation of the aesthetic qualities of the area.***

The Natural and Cultural Resources chapter includes goals and policies on mineral and other earth resources, including mitigation of adverse impacts and protection of scenic values.

11. ***To ensure the availability of safe and affordable housing for all Vermonters.***

Rutland Regional Plan

Adopted June 17, 2014

The Future Use of Land Map

The *Regional Plan's* Future Use of Land Map is a general guide for the forthcoming growth of the Region. It is based upon analyses from throughout the *Plan* and attempts to balance competing and complementary goals into a single image.

The map is intended to be conceptual; boundaries between area are imprecise. Specific sites and their prescribed uses are addressed locally.

The map is divided based on preferred densities of development intensity of activity. These include four generalized land use areas, a series of labels for the Region's town centers and villages. Together, these designations promote a cohesive pattern of growth and conservation that advances the intent of the *Rutland Regional Plan*.

Why the Labels and Land Use Areas Exist

The map is based on an analysis of the location, magnitude, and potential of multiple features that make different areas more or less suitable, with a goal of making efficient use of limited infrastructure and maintaining the unique qualities of the Region.

For example, business and industry rely on the presence of public water and sewer, close proximity of major transportation networks, and, in some cases, access to markets for selling their goods.

By the same token, due to physical site limitations (steep slopes and wetlands, among others) and relatively high costs incidental to land development in certain areas, much of the Region is not readily available for development. These areas are suited for less dense and intense development, in keeping with the Region's rural environment.

Additionally, deep, well drained soils, proximity to good roads, and access to markets as key elements of a successful agricultural future for the Region. The *Plan* is also intended to provide for the long-term sustainability of resources, open space and scenic lands.

Finally, the *Plan* seeks to promote housing and small business development within and adjacent to villages that is in keeping with their unique histories.

The attached map depicts both an efficient use of land and a shared vision for the future based on public input. It should be used as a guide for future development of the Region. Planned growth and development is directed to those areas most suitable for such development and away from areas in which the proposed growth would be incompatible, due to the availability of services or protection of resources.

Why the Map is Blended

Boundaries between the four land use areas are intentionally blended to underscore the regional nature of the map and to promote growth and development that is within and contiguous to existing villages, hamlets, town centers, and sub-regional centers.

Using the Map's Legend

High Density Development Areas

Areas shown as "high density" on the map are those most suitable for large-scale activity, within and in areas contiguous to the Region's downtowns, sub-regional centers, and industrial centers. They share a number of common features which make them attractive and suitable for these types of activities:

- Ease of access to major transportation routes
- Availability of utilities, including public water and sewer and high speed telecommunications
- Historic and current areas of concentrated population, business, and education
- Less critical natural resource and wildlife areas

These areas include the following designations within the Region:

Urban Center- The Region's economic, population, education, and service focus areas. Businesses and services in this area draw their employees and clients from throughout the Region. Many of the Region's largest employers are located in area, making use of the conglomeration of people and services.

Sub-Regional Centers-Areas where central public utilities for water and sewer are available and where there exists a central location or locations for commercial activities, schools, and civic activities for the town and surrounding towns.

Industrial / Business Parks - Areas designated by towns around

the Region and by the Rutland Economic Development Corporation as concentrated locations for business and industrial development. Parks have been designated in Clarendon, Brandon, Rutland City, Rutland Town, West Rutland, and Fair Haven.

RUTLAND STATE AIRPORT- The Region's principal airport offers commercial air travel and general aviation services. It is closely linked to adjacent industrial parks.

For the future:

Development in high density areas, including downtowns, sub-regional centers, and industrial / business parks should be concentrated to make efficient use of the Region's most concentrated infrastructure.

MEDIUM DENSITY DEVELOPMENT AREAS

Areas shown as "medium density" on the map include land in or adjacent to town centers, villages, and areas concentrated immediate around the Region's major lakes and ponds—Lake Bomoseen, Lake St. Catherine, Lake Hortonia, Chipman Lake, and Lake Sunrise. These areas serve a number of purposes and are likely to face the most change in the coming years. These areas are, as a general rule served by some but not all of the features common to "high density " areas.

These areas include the following designations within the Region:

TOWN CENTERS- Areas where central public utilities for water and sewer are generally available and where there exists a central location or locations for commercial activities, schools, and cultural and civic activities for the town.

VILLAGE CENTERS- Areas that have developed into small community centers and normally consist of mixed land uses at medium densities. They also generally have consolidated groups of structures located on or near a major highway.

For the future:

Development in medium density areas should serve to reinforce neighborhood-scale town centers and villages and make efficient use of limited infrastructure and space. Where medium density activities already exist outside these centers, future growth and development should seek to create more efficient use of land and infrastructure.

LOW DENSITY DEVELOPMENT AREAS

Areas shown as "low density" on the map are Rutland County's working landscapes. They include areas with small, historic hamlets as well as actively farmed or logged terrain. Features they share:

- Limited public utilities
- Productive agricultural soils in lowlands
- Little concentration of population and business
- Greater critical natural resources

These areas include the following designations within the Region:

HAMLETS- Areas that contain small groupings of homes and locally supported stores and businesses. Generally, hamlets are not trade centers, nor do they contain community water supply or sewer systems.

For the future:

Agricultural and silvicultural activities should continue to dominate the Region's low density areas. Development in low density areas should be unobtrusive and maintain the rural character and scale of the locale.

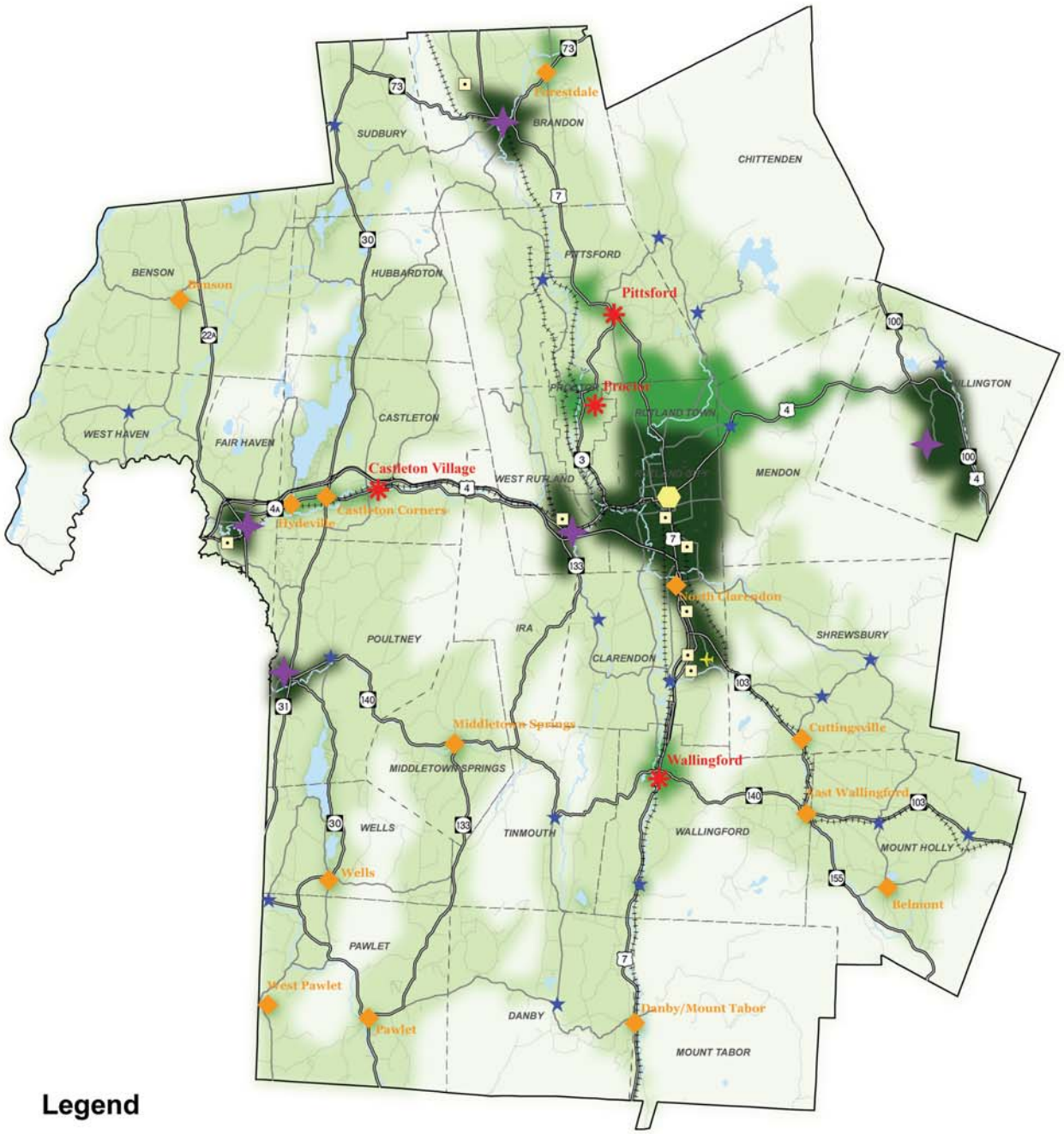
DEVELOPMENT-CONSTRAINED AREAS

Areas shown as "development-constrained" have significant limitations upon current or future development because of conservation easements, public ownership, or severe natural limitations. These include lands owned or overseen by the National Forest Service, the State of Vermont, or land trusts, as well as large tracts of land that are on slopes over 25% grade or are wetlands.

For the future

Conservation of the natural landscape and careful management of lands is sought for these areas. Development should remain extremely limited.

Rutland Region
Future Use of Land



Legend

- Development Constraint Areas
- Low Density Development
- Hamlets
- Medium Density Development
- Villages
- Town Centers
- High Density Development
- Urban Center
- Sub-Regional Centers
- Business / Industrial Parks
- Rutland State Airport

Note:
This map is a generalized land use map. It is not intended to regulate actual uses in specific geographic areas, but instead reflect potential land use patterns. This map is for planning purposes only. Determination of appropriate land uses for a specific site necessitates thorough review of the local plans and by-laws as well as the policies of the Regional Plan. For more information, please contact the RRPC at (802)775-0871 or (800)464-7900, or at www.rutlandrpc.org.

0 4 8 12 16 Kilometers

0 4 8 12 Miles

Created January 27, 2005: updated January 24, 2006
Adopted May 16, 2006

N W E S

RUTLAND REGIONAL PLANNING COMMISSION

It is the community's responsibility to support the creation of housing that meets the needs and desires of residents in a manner that enhances that community's character. It is also important that communities allow a mix of housing types, forms, density, transportation options and price ranges in order to meet the varied needs of residents.

It is important to be aware that housing does not take place in a vacuum. Even the best housing development or redevelopment can be a poor fit for residents and the community if transportation, employment (including agriculture), and services are not built following the same framework.

Advocacy

Many of the factors that affect the availability of housing are not under the direct influence of local decisions. Where this is the case, individuals and organizations must advocate for change in policies at a broader level. Among those cited:

- Changes in state regulatory mechanisms to promote compact development, mixed-use and increased density in urbanized and immediately adjacent areas.
- The need for greater availability of Section 8 housing certificates and support for subsidized housing.

RUTLAND RPC GOALS

- Make efficient use of land in new housing development by maximizing density, utilizing a connected street network, and incorporating cluster development/conservation subdivision design.
- Meet housing needs of diverse socioeconomic groups by including affordable, subsidized, and below-market housing.
- Make housing accessible to employment, services, educational, and recreational facilities by multiple forms of transportation.
- Locate new housing, including multi-family housing, in village centers, areas of mixed-use development and adjacent to existing settlement patterns. Avoid Greenfield development outside of existing settlement areas.
- Improve substandard housing to comply with State and Federal Fair Housing laws and nationally recognized building codes.
- Redevelop former industrial, commercial, brownfields and institutional buildings into housing and/or mixed-use structures.

RUTLAND RPC ACTIONS

The Rutland Regional Planning Commission shall achieve these goals through assisting communities to develop bylaws and town plans; regional approval of town plans; participating in Act 250 and Section 248 processes, training and education, information dissemination, preparing funding applications, and GIS mapping.

FOOD FOR THOUGHT

Spotlight on Child Care:

A key issue related to housing affordability is the presence (or lack thereof) of child care alternatives for residents.

Safe and affordable child care is integral to families' ability to have jobs that meet financial obligations and ongoing schooling.

In 2010, 4.6% of the County's population, or 2,832 people, were under the age of five. Rutland County is served by approximately 86 registered and 70 licensed child care providers.

Child care is a multi-facetted issue. Services must be provided in various locations (close to homes for some families, close to work for others) and with flexible schedules for those parents who work service-based or second-shift jobs and are in need of child care at non-traditional hours.

Coolidge, Aiken, West Rutland, the Lower Clarendon Gorge State Forests represent over 20,000 acres of land in the County open to undeveloped recreation. The Lower Clarendon Gorge State Forest provides day use access to an important natural water feature and scenic area. These forests also host hiking trails and some link together other important conserved lands. Coolidge Forest connects the north and south sections of the Green Mountain National Forest.

Rutland County has four state parks. On the western side of the County, three parks provide camping and water access to Lakes Bomoseen and St. Catherine as well as Half Moon Pond. In the Green Mountains, Gifford Woods State Park provides camping and picnicking opportunities adjacent to one of Vermont's best known old growth hardwood stands. The Appalachian Trail runs through the park and joins the Long Trail in the vicinity. Many State Parks have large acreage open to undeveloped recreation as well.

Municipal Forests

Most Municipal Forests were created in the early 1900's through legislation authorizing the establishment of "endowment forests." Seventeen towns in the region have at least one, ranging in size from 15 to over 1,000 acres. Municipal forests account for close to 10,000 total acres in Rutland county.

In a 1931 report from the Vermont Commission on Country Life, the value of these resources was described as, "a source of public education. Schools as well as the general public can here secure first hand information that often is obtainable in no other way. Such a forest area may well be the recreational center for the community, and when properly managed and administered, should become a source for revenue."

In Rutland, municipal forests were historically managed for timber revenue. While this is still the case in many instances, there has also been a shift to management of these forests for recreational and educational uses as well. Many town's maintain signed hiking trails and wildlife viewing areas as well as other recreation opportunities, and encourage use of the forests by residents and school groups.

Currently, many towns are recognizing the public benefit municipal forests can provide, and are working with Rutland County's Forester (an employee of the Vermont Department of Forests, Parks and Recreation), to create management plans that identifies the variety of values and uses for the forest as identified by town residents.

Wildlife Management Areas

Plymsbury, Shrewsbury/Plymouth, Otter Creek, Whipple Hollow and Buzkeck Wildlife Management Areas are also open to the public for nature watching and hunting and represent additional acreage appropriate for recreational use in the County.

CONNECTING THE PLAN

Access to recreation facilities is a transportation issue for residents dependent on public transportation to reach recreational opportunities. The condition of highways and trails to reach recreation areas affects their accessibility as well.

Lucas Somers

The Rutland Region Fieldhouse, opened in 2004, offers a playing surface for hockey, indoor soccer, and other events years round.

Chapter 13: Agriculture and Forestry

Introduction

The natural and working landscape in Vermont and in the Rutland Region, is prized by people who live, spend their vacations here or travel through. As "natural" as they seem, the beauty and charm of these places are largely linked to the ways the land has been used by farmers.

In the 1850's farming, particularly the raising of grazing animals, was so widespread in Vermont trees were cleared and only 20% of the land was covered by forests. Today, that trend has reversed as large tracts of land previously used as pasture have grown up into forests. In 2002, 75% of Rutland County's land was classified as forest land. Both farmland and forests remain important elements of the Region's economy, ecosystem, and character.

This section is focused on the link between land use, transportation, economic development, and the "working landscape".

Current Conditions

Agricultural Resources

Outside of the Rutland City core, the Rutland Region remains a rural area with a wide variety of active farms and farm-related businesses. While dairy is the most visible and the most widespread farm type, there is a wide variety of foods and other farm goods produced in this Region including beef, lamb, eggs, fruits, vegetables, berries, honey, maple syrup, Christmas trees, ornamental plants, fibers, and specialty "value-added" foods such as jams, salsa, artisan cheese and herbs.

Forest Resources

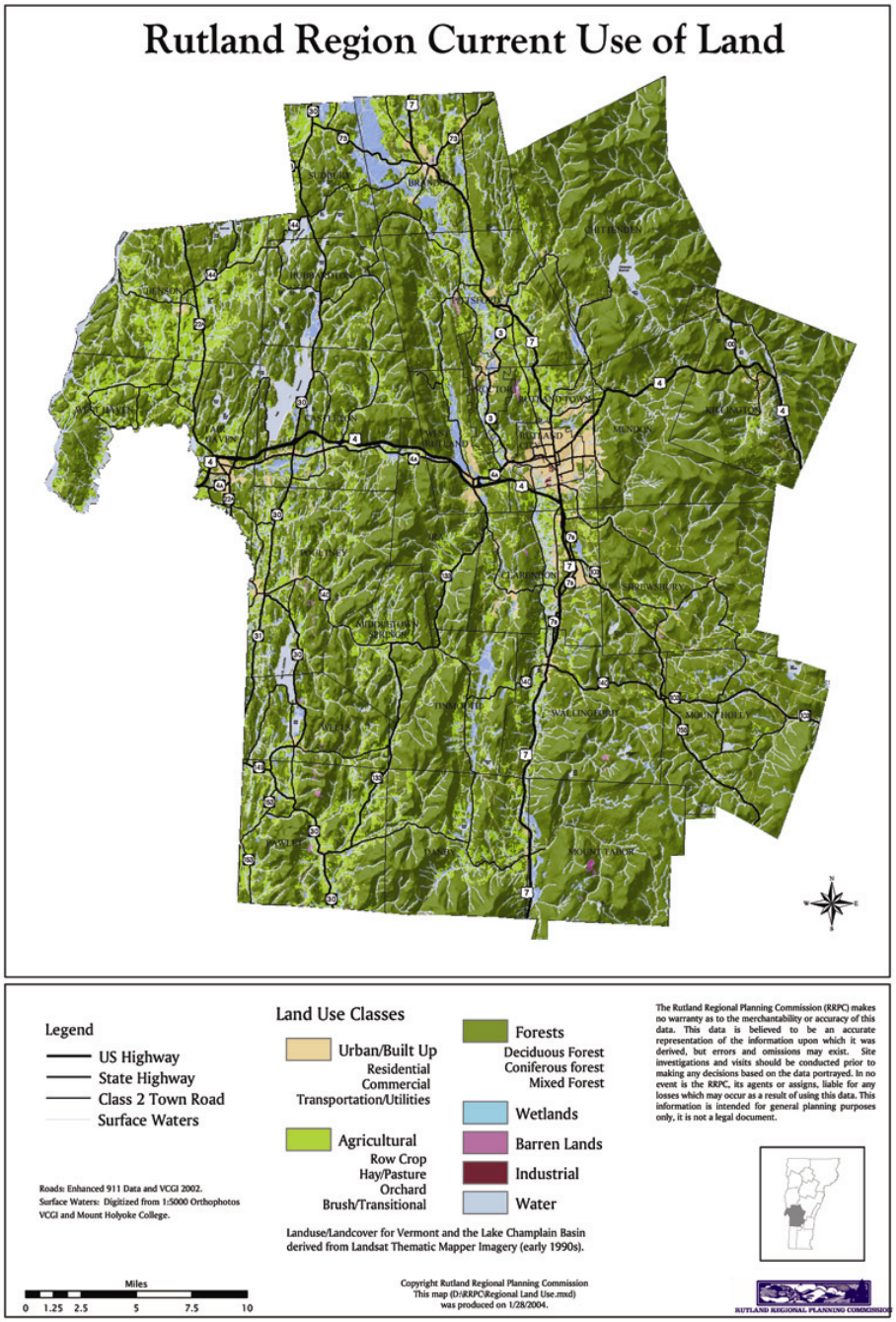
The Region's highly productive forest soils have made timber harvesting a sustainable activity that contributes to the economy and supports a number of related industries. In 2000 and 2001, Rutland County was 1st in the State in the share of hardwood being produced.

The forests contribute to the region's economy by attracting outdoor recreation enthusiasts, hunters, and

FAST FACT

Right-to-Farm Law

Vermont has a statewide Right-to-Farm law that essentially protects existing farm operations from lawsuits by new residents and others that claim farm operations are a nuisance. This law was recently strengthened.



FAST FACTS

Rutland County

Land in farms

- Decreased 5% from 132,674 acres in 1992 to 125,770 acres in 1997.
- Decreased an additional 4% to 121,203 acres in 2002.

Average size of farms

- Decreased 12% from 269 acres in 1992 to 237 acres in 1997.
- Decreased an additional 18% to 195 acres in 2002.

Market Value of Agricultural Products Sold

- Increased 4% to $28,357,000 from 1992 to 1997.
- Decreased 16% to $23,987,000 from 1997 to 2002.

Market value of agricultural products sold, average per farm

- Decreased 4% from $55,470 in 1992 to $53,504 in 1997.
- Decreased additional 28% to $38,503 in 2002.

opportunities to buy products at a local farm stand or farmer's market, or from major grocery chains that are starting to purchase from local producers and advertise the availability of these products.

Equine Industry

A growing number of farms are being used for horses either simply to board and pasture, or as riding stables and arenas that tend to be viewed as more commercial ventures than agricultural uses. Between 1992 and 2002, the number of farms with horses as part of the operation more than doubled, from 75 to 180. While pasturing horses helps to keep the lands open, the more intensive riding uses are not always welcomed in a community. An issue local towns need to consider when drafting land use regulations is whether or not they want to allow or encourage these alternative uses of the land.

New Farmers

The median age of farmers in this region is rising. As current farmers approach retirement, new farmers need to be located. There are a number of statewide efforts to link new farmers with available mentors, business planning assistance, and land.

Farm and Forestland Protection and Land Conservation

There are a number of organizations (e.g. Vermont Land Trust and The Nature Conservancy) as well as State programs that focus attention on preserving valued farm and forest lands through donations, purchase or "conservation easements" which pay the landowners to keep the land in agricultural use versus parceling it off and selling it for development. There has been significant action in the Region through these types of models. The conserved land establishes and maintains undeveloped land that will remain an opportunity for agriculture and forestry that would not exist if the land were developed.

Despite its obvious benefits, some potential shortcomings have been identified as this method has matured. For example, there are concerns about how the purchase of development rights will affect future generations of farmers who will not have the opportunity to parcel off some of their land when funds are tight. There is also a concern about what happens to the land if a landowner stops farming. Other concerns revolve around rising land and housing prices in close proximity to conserved lands perhaps due to the presence of these lands. These concerns have caused increased scrutiny of these programs and is spurring ongoing improvements to the ways in which conservation occurs.

MEETING CURRENT AND FUTURE NEEDS

Informed land use decisions

In order to proactively protect agricultural and forest lands, Towns might consider how these uses are treated in their local plans, zoning and subdivision regulations. Farm operations are exempt from local zoning laws, Towns can identify districts where agriculture is allowed, and whether or not other uses are also allowed. Providing a separation or attention to how surrounding parcels are developed can help avert some of the potential conflict between farm business operations and residential homes. Likewise, subdivision regulations can consider the impact a land division and development scheme would have on forestlands and agricultural parcels when making decisions in this regard.

FOOD FOR THOUGHT

Farm and forest lands have a number of benefits:

- Production of local food products significantly reduces transportation costs and consumption of fuel;
- As a land use, agriculture has a positive fiscal impact on the community's tax base (ie. demands less services than it contributes in taxes);
- Farming of certain crops is a positive use of floodplain areas;
- Open fields, forests and meadows are an important areas for groundwater recharge ;
- Locally-owned and operated businesses such as farms and wood manufacturers circulate local money in the local economy;
- Corn fields and other farmlands provide habitat for wild animals including deer, turkey and woodcock;
- Forests provide habitat to a wide range of animals and birds, including large animals such as moose, bear and large cats;
- Active farmlands provide open space and scenic views as well as a land use tradition characteristic of rural Vermont; and
- Forests provide a variety of outdoor recreation opportunities as well as a varied and scenic backdrop throughout the year.

in the coming years. Financial incentives to seasonal employees may be an enticement. Elsewhere there are programs designed to recruit a pool of workers interested in seasonal agriculture jobs.

RRPC ACTIONS

In addition to supporting activities and developments that contribute to individual communities and the Region, and which help meet the needs identified in this Plan, the Rutland Regional Planning Commission shall:

- Work with interested communities to better support the retention and viability of agricultural and forest lands through their land use plans and regulations and remove language that may unintentionally inhibit farm and forestry enterprises.
- Work with area farmers and the Rutland Area Farm and Food Link to identify gaps in infrastructure needed to increase supply of agricultural products produced in the Region.
- Work with local towns and land trusts to examine the effects of land conservation techniques.
- Partner with other organizations to create a farm incubator in the Rutland Region to help new farmers get started in this Region.
- Support partnerships with Natural Resource Agencies to plan for sustainable farming and forestry.
- Where housing or other development on lands suitable for agriculture and forestry is proposed, help shape land use regulations and development review to encourage cluster housing to allow for the continuation of large tracts.
- Work with the Rutland Workforce Investment Board to address employment needs of farm and forestry sectors.
- Promote density-based or sliding-scale zoning in land use bylaws to allow for the retention of large parcels, while allowing for small house sites.
- Map significant agricultural and forest lands in municipal plans and identify for protection.
- Do not support Act 250 applications that permanently destroy significant amounts of farm and forest lands.

ADDITIONAL RESOURCES

One of the objectives of this Plan is to provide communities with the tools, and the framework, for developing effective local plans and policies. This Plan should be used as a resource for communities preparing plan updates. In addition to the plan, however, a number of other resources are available:

- US Census – (www.census.gov). This site contains the most commonly used housing and demographic data across the country
- 2002 US Census on Agriculture (www.census.gov).
- Vermont Agency of Agriculture website (www.vermontagriculture.com)
- Cornell Community Food and Agriculture Program website (www.cfap.org)
- Food Routes website (www.foodroutes.org)
- Vermont Fresh Network (www.vermontfresh.net)
- Rutland Area Farm and Food Link website (www.rutlandfarmandfood.org)
- Poultney-Mettowee Natural Resource Conservation District (www.vacd.org/pmnrcd)
- Rutland Natural Resource Conservation District (www.vacd.org/rutland/)
- Vermont Forest Parks and Recreation Maple website (http://www.mapleinfo.org/)
- Vermont Division of Forestry website (http://www.vtfpr.org/htm/forestry.cfm)

Chapter 14: Wildlife and Natural Habitats

Introduction

The natural heritage of Vermont makes it undeniably beautiful, and the forests and mountains that make the open fields striking. Residents and visitors are connected to the environment, dependent upon its soils and waters for sustenance and fulfillment. In turn, the wildlife that lives here is connected to the people, their survival dependent on the way land is developed.

Results from a 2001 public opinion survey conducted by the U.S. Fish & Wildlife Service show that Vermonters appreciate wildlife more than any other state; Vermont ranked *first* in the nation as having the highest percentage of residents who actively viewed wildlife (60%). A more recent survey of Vermont residents found that protection of fish and wildlife resources, habitats and lands, as well as the opportunity to participate in wildlife-related recreation was important to 97% of all Vermonters (*source: Conserving Vermont's Natural Heritage, pp 8-9, Vermont Agency of Natural Resources, 2004).*

This chapter of the *Plan* examines wildlife habitats and corridors, their role in the Region's ecosystem, and their relationship with land use.

Current Conditions

Natural Habitat

As described in the Regional Profile, Rutland County is made up of four of the eight biophysical regions in Vermont, designated by several factors such as geology and habitat. These diverse habitats contribute to a high species diversity in the County.

Fisher, bobcat, coyote, fox and bear represent the carnivorous and omnivorous mammals that roam our forests and waterways. Smaller mammals including raccoons, opossums, mink, otter, ermine, skunks, and muskrats are also present. Whitetail deer populations and wild turkeys typically serve as a backdrop to the Region's agricultural landscapes, and moose can be found in forest and marshlands. Large member of the rodent family, such as the American beaver and the porcupine can also be found in forested areas. Insectivores such as bats are also present throughout the Region.

Rutland County also hosts the most diverse populations of Odonata (Dragonflies and Damselflies) in the state. This apparent abundance can also be attributed to the diversity of habitats and the vast survey efforts undertaken in our Region.

Birding is a recreational hobby that is common in the Region, as Rutland County is on a migratory flight path to Canada. The grasslands, marshlands, farmlands and forested lands promote avian diversity throughout the Region.

Threatened and Endangered Species

Rutland County is home to several species listed as rare, threatened, or

An essential natural habitat for deer, wintering areas provide forage and shelter for this species.

FAST FACT

Area-sensitive species, especially carnivores and omnivores, require a large 'range' for survival. Development within these ranges causes the species' numbers to suffer.

For example, a Bobcat needs a range of 20 square miles, whereas a Black bear requires a range of 20 to 50 square miles.

Useful information can be found at www.keepingrack.com, an organization committed to improving wildlife knowledge and understanding across the

endangered.

The timber rattlesnake can be found in twelve Vermont towns, half of which are in western Rutland County. West Haven is also home to the Five-Lined Skink, the only lizard native to Vermont, currently protected as endangered under state law. The eastern rat snake (or black rat snake), is also listed as threatened in the State of Vermont.

The bald eagle can be spotted over the Chittenden Reservoir during the summer months as well as in West Haven. There are currently no successful nesting pairs in Rutland County, however the habitat for these birds does exist. Rehabilitation efforts are underway by Vermont Audubon, Vermont Bald Eagle Restoration Initiative, and the Vermont Institute of Natural Science.

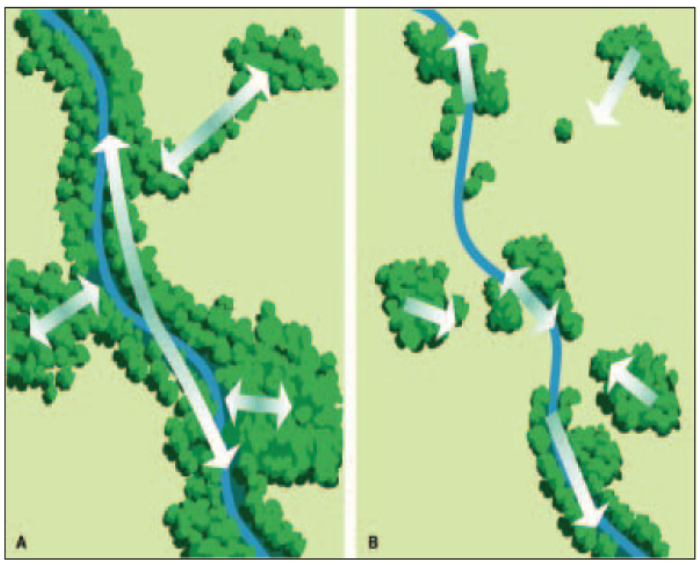
The peregrine falcon, whose populations have recently recovered, so much so that in 2005 this species was removed from the Federal Endangered Species list, were found nesting in the western part of the County in 2002. These mountains provide the falcon's habitat; high ledges near open areas like rivers, lakes or fields.

The Indiana bat is listed as endangered at both the State and Federal level. Scientists from the Vermont Department of Fish and Wildlife are currently undertaking research that would pinpoint 'roost tree' locations. Because this mammal is so small and difficult to track, it is important to identify current roosting sites, so that scientists may be able to predict future roosting sites and properly implement conservation strategies here as well.

FAST FACT

The Vermont Land Trust focuses on properties with reasonably stocked working forest parcels and poorly managed or liquidated working forest parcels with a history of high-grading or clear-cutting. Areas are also considered which have significant ecological resources, including riparian areas, significant plant or wildlife habitat, sites identified as important by the VT Nongame & Natural Heritage Program, and Class I and II wetlands.

Wildlife Habitat Connectivity



The above map show the physical differences between (A) high and (B) low degrees of connectivity. The patches of habitat in figure (B) are not suitable habitat for wide-ranged species and even some smaller species that rely on a combination of water and forest habitat. *Source: Vermont Department of Fish and Wildlife*

Unmet Needs

Loss of Habitat

Habitats and the corridors between them are essential for the survival of all species.

Development has claimed thousands of acres of Vermont's forestland and farmland, fragmenting habitat. Roads, buildings lawns, and parking areas have affected the ability of animal specifies to migrate, forage for food, and nest.

In recent years, strip development has exacerbated this problem. These human-made obstacles further fragment wildlife habitat, often causing an increase in human-wildlife conflicts, and an unhealthy decrease in species' abundance. For this reason it is important to identify and conserve established contiguous forests, or areas of forest habitat with little to no roads or other human development. All species, and notably the larger mammals such as bobcat, black bear, and wood thrush, rely on these ranges for reproduction and food sources.

Contiguous forests also encourage healthy interaction between the species and. Connected habitats allow wildlife the ability to mix with other populations of the same species in the area, creating a veritable breeding ground that would promote the transfer of genes necessary to maintain a healthy population.

Grassland bird habitat is also on the decline, due to agricultural activity

throughout the Region. Current mowing schedules allow for haying in mid-May, a time when grassland songbirds are nesting. Second-cut usually arrives within 35 days, which is barely enough time for these birds to re-nest before the area is mowed again. Agriculture is a necessity that should be promoted in our working landscape, however those who do not need rigorous haying schedules can delay cutting or use the land for pasture until mid-July as an alternative.

Isolated habitats are frequently unprotected from development, and shoreline encroachments have destroyed many important reproductive areas for animals of all species.

Unprotected Corridors

Wildlife corridor management is a topic that has yet to be broached by most municipalities. Patches of conserved land may have little to no benefits to the greater ecosystem without appropriate connections or corridors.

Mapping forest densities and core habitats can show where corridor protection may be necessary for wildlife protection. Where habitat and roads collide, appropriate signage should be used to warn motorists of crossing animals and minimize road kill incidents.

Where prime habitat and corridors can be conserved, this is the preferable route. Where this is not feasible It is important that efforts be taken to mitigate the impacts of development on natural communities. The ideal would be to invest in protecting prime habitat areas *before* they are considered in the real-estate market.

Information Gaps

One of the biggest detriments to species conservation in our area is a general lack of data. More information is needed on Vermont's Natural Heritage.

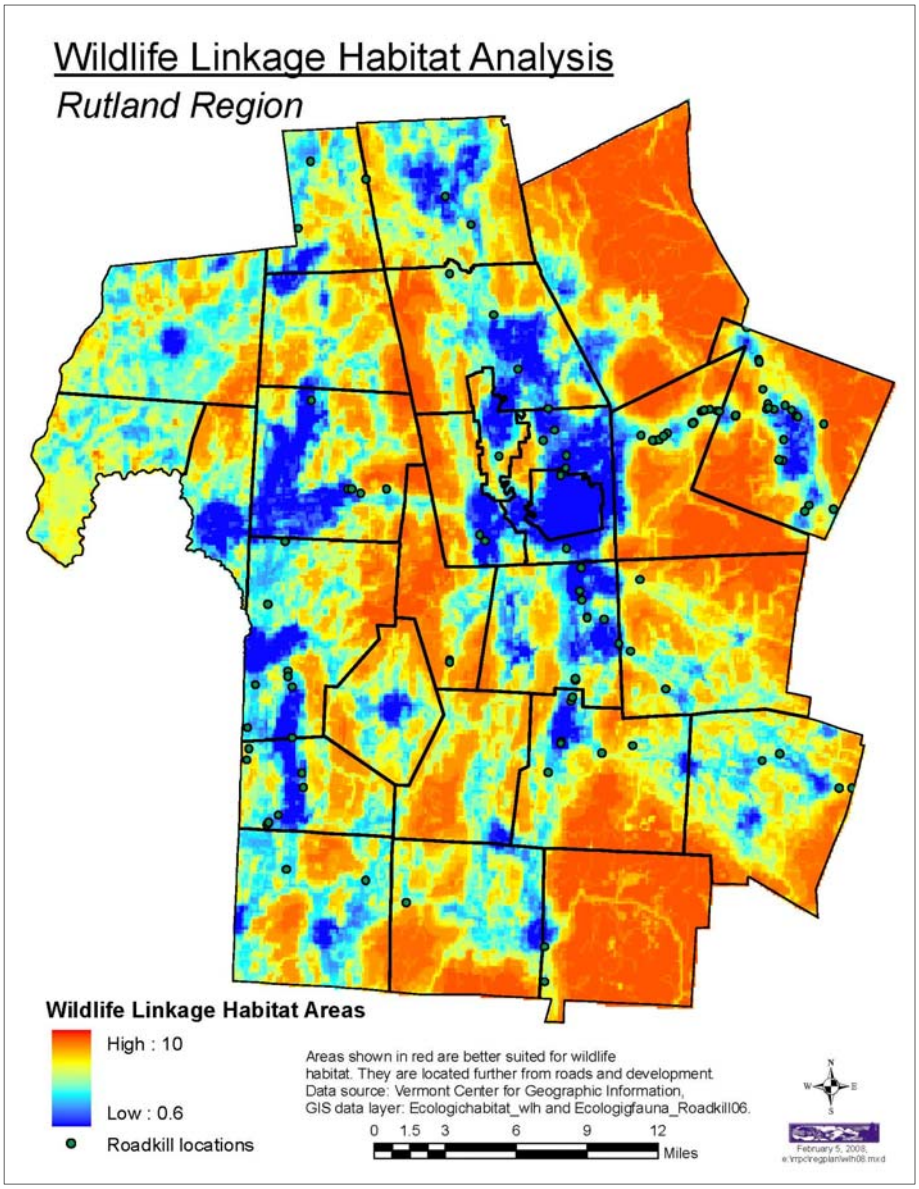
The Vermont Wildlife Action Plan lists insufficient data as one of the most common impediments to species conservation.

Municipalities have been reluctant to adopt regulatory tools for protecting sensitive habitat in part due to missing data and lack of resources; they may not know that the woods in their town contains sensitive habitat.

Perhaps the most difficult challenge in management of wildlife and natural habitats is the extension of policies beyond political borders – be they town, county, or state lines. Initial efforts at watershed-based planning have proven successful; the Poultney-Mettowee Watershed plan,

DEFINITIONS

INVASIVE SPECIES:
The National Invasive Species Council's Invasive Species Advisory Committee defines invasive species as "alien species whose introduction does or is likely to cause economic or environmental harm or harm to human health"



CONNECTING THE PLAN

Wildlife habitat and water quality are closely linked. Plants and animals need fresh marshes, streams, and ponds for survival and in turn serve as effective filtering systems when healthy.

Having a better understanding of predator/prey relationships in our region will allow for better decisions when managing these important mammals.

Future Trends

- With a growing population and an increase in the number of second homes, habitat fragmentation is likely to continue. Municipalities must regulate existing prime habitat and shoreline locations in an effort to protect wildlife from this habitat destruction, and the valuable services intact ecosystems provide the community.
- Advancing technology will furnish ways for developers to construct on steeper slopes and ridgelines. It is important for municipalities to identify these isolated habitats, and through land acquisitions or transfer of developmental rights, conserve these lands from future development.
- Shoreline development, if unregulated or improperly regulated, will continue to decimate important wetland, marshland, and riparian habitat, and an increase of water recreation could continue the promulgation of aquatic nuisance species.

  Animals affected by this disruption include aquatic life, amphibians, birds, and small and large mammals and human water supply. Local District Environmental Commissions have been working with lakeshore residents to combat aquatic nuisance species, using recent technology to eradicate identified populations, and utilization of signage and education to promote awareness of this growing problem.
- Nuisance species will continue to expand their ranges as the climate shifts, causing an imbalance in the local forest ecosystem and displacing native species of plants and animals.

Meeting Current and Future Needs

Municipal Responsibility

CASE STUDY: Success in Conservation

The Helen W. Buckner Memorial Preserve

West Haven's Helen W. Buckner Memorial Preserve at Bald Mountain is Vermont's largest preserve to be managed by the Nature Conservancy. Over a seventeen-year period, the non-profit organization acquired 3,776 acres of land for this project.

In 1988, 1500 acres of the Galick Farm was purchased. The Nature Conservancy purchased land from eight other landowners as well.

Being a non-profit organization, approximately 50% of the funding for such a project is derived from public donations, and the other 50% is derived from private donations, such as the Vermont Housing and Conservation Board, who give donations to many non-profit organizations for local housing projects, agricultural and forestland protection. The Nature Conservancy has a Preserve Management Staff that ensures the land is protected from misuse.

Habitat areas located within the Preserve include talus slopes and clay plain forests, two of the State's more rare resources. These areas provide habitat for many unique species, among them the Five-Lined Skink, Vermont's only lizard. Much of the clay plain forest area in the State, known for its rich soils, were lost due to clearing for agricultural uses.

Many tools are available for municipalities to take charge of conserving their own natural heritage.

Land Use Regulations: Several zoning tools are available to municipalities, including *conditional use review, site plan review, transfer of development rights, wildlife overlay districts,* and *planned unit development* (PUD) bylaws, which typically require a certain portion of a subdivision to be conserved as open space in exchange for the ability to deviate from set back and density requirements. Each of these tools can be incorporated into land use regulations in towns with adopted plans.

In addition, municipalities, and the State, can provide education and hand tools to residents to help reduce the spread of invasive plants and animals. Signs asking visitors to a boat access to clean off milfoil, together with a garden hose for public use, can be an effective and inexpensive management option.

Nonprofit Organizations

Non-profit organizations such as the Vermont Land Trust seek to conserve land through the purchase of developmental rights. These conservation easements protect the value of the land, while providing conditions and terms for how the land will be managed.

Management plans produced by foresters and conservation biologists have tied long-term economical prospects into the conservation of privately owned lands, and have grown in popularity in recent years. With these practices, a landowner can protect the equity of his woodlots while maintaining the natural ecosystem of the property for nesting and migrating animals.

The Nature Conservancy is another organization that seeks to protect important lands, through donations, easements and acquisitions.

Other non-profit organizations working to protect wildlife in the Region include Vermont Audubon, Vermont Institute of Natural Science (VINS), Keeping Track, and the Vermont Non-Game and Natural Heritage Program (NNHP). These organizations undertake research on Vermont's natural heritage in order to provide data that can be used in making reasoned landuse decisions. Many of these actively promote citizen participation in this vast monitoring effort. Among them:

- Keeping Track trains citizens to track and document the behavior of wildlife in local communities.
- The Vermont Institute of Natural Science merges conservation biologists with volunteer citizens to encourage local observation and reporting of species habitats, especially bird flocks and nesting sites. Currently, there are over 15 "VerMonitors" at large in Rutland County.

FAST FACT

In a healthy ecosystem, nature will provide its own checks and balances. The latest influx of tent-caterpillars, a native defoliator of aspens and sugar maples, has been offset due to a significant rise in the population of tent-caterpillar parasites, nicknamed "the Friendly Fly." Big and clumsy, the Friendly Fly does not bite the humans that it (constantly) lands on, but rather, it lives to inject tent-caterpillar cocoons with it's own offspring, who prey on the pupae inside.

ADDITIONAL RESOURCES

- *Conserving Vermont's Natural Heritage: A Guide to Community-Based Planning for the Conservation of Vermont's Fish, Wildlife, and Biological Diversity;* Vermont Fish and Wildlife Department, Waterbury, VT, 2004. Available at your Regional Planning Commission.
- The Nature Conservancy: Conservation organization and large land owner: *www.tnc.org*
- Vermont Agency of Natural Resources website, *www.anr.state.vt.us*: contains information and contacts for all state programs related to wildlife, water quality, forests, parks, etc.
- Vermont Institute for Natural Sciences (VINS): *www.vinsweb.org*
- Vermont Housing and Conservation Board, *www.vhcb.org*: provides funds for affordable housing and land conservation
- Vermont Land Trust, *www.vlt.org*: primary conservation and agricultural easement non-profit in the State.

FOOD FOR THOUGHT

Canary in the Coal Mine: How Neo-Tropical Songbirds Paint a Picture of World Health

In the spring and summer months, Rutland County residents can look forward to the bright blues, reds and yellows of the tropics, just outside their windows. Many Neo-Tropical songbirds have chosen the Northeast United States as their choice breeding grounds, traveling thousands of miles to meet their mates in the Green Mountains.

If scientists observe a reduction in species abundance, it can either be assumed that the birds are going through hard times in their equatorial homes, or that they are facing difficulties finding adequate breeding grounds here in Vermont.

- "Citizen Scientists" are encouraged by Vermont Audubon and the Cornell Lab of Ornithology's E-bird program to observe bird behavior, either in their own backyards or at popular nesting or migration sites.

RUTLAND RPC ACTIONS

In addition to supporting activities and developments that contribute to individual communities and the Region, and which help meet the needs identified in this Plan, the Rutland Regional Planning Commission shall:

- Through GIS Mapping assist towns identify wildlife and natural habitat areas for protection in municipal plans and land use bylaws.
- Assist municipalities in managing 'sensitive' habitats via land use regulations, including planned unit developments, overlay districts, and others.
- Provide information regarding conservation easements and the organizations that offer them.
- Work with the Poultney-Mettowee and Otter Creek Natural Resource Conservation Districts, River Corridor Management Program to better address issues of nuisance species, watershed protection, and riparian buffers, and to prioritize these initiatives.
- Aid towns in identifying native species for use in screening and landscaping.
- Establish a partnership with neighboring counties in New York to identify and protect shared natural assets. The Adirondack Park Invasive Plant Program (APIPP) is a great example of regional invasive species work.
- Provide information to towns on the importance of wildlife and natural habitat migration corridors. Use GIS to map and identify these areas for protection in land use bylaws and municipal plans.
- Do not support Act 250 applications that significantly impact or destroy wildlife or natural habitats.

Southern Windsor County 2009 Regional Plan Volume 1 of 2

Effective July 21, 2009

I. INTRODUCTION

A. Background of the Commission

The Southern Windsor Regional Planning Commission (RPC) was established in 1966, as the Southern Windsor County Regional Planning and Development Commission, through the action of its constituent towns. The original eight member towns were not contiguous and it wasn't until 1970 that the RPC began receiving state and federal funds. Currently, the RPC's activities and programs are governed by a ten-person Board of Commissioners; each appointed by the legislative body of his or her member town, with assistance from up to three "at-large" Commissioners as appointed by the Board of Commissioners. In addition, the Board has the responsibility of hiring staff to carry out the goals and policies of the Regional Planning Commission.

The RPC also has the authority to establish advisory committees to address specific regional issues. Currently, the Commission has two such committees, the Brownfields Steering Committee and Transportation Advisory Committee (TAC). Representation on the Transportation Advisory Committee consists of one representative from each community, an ex-officio representative of the Agency of Transportation and provision for two "at-large" members. The primary mission of the Transportation Advisory Committee is to develop and evaluate transportation policy and recommendations as they relate to the Regional Transportation Plan and the Regional Plan.

The primary intent of the RPC and its advisory committees has always been to assist with and advocate for the planning and development activities of its member towns. The RPC exists primarily to provide technical assistance to its member towns; assist in mediating inter-jurisdictional planning and development issues that arise between member communities; facilitate discussion and understanding between local and state entities; develop plans, policies, strategies, and procedures for addressing issues that are regional in scope; assist communities with downtown revitalization and community development projects; annually compile, review, and prioritize regional transportation improvement projects for submission to the Agency of Transportation; and to serve as an information resource for member towns and residents.

B. Statutory Authority

The RPC is authorized pursuant to the duties and optional powers listed in the Vermont Municipal Planning and Development Act (herein referred to as "the Act") [24 V.S.A. §4345]. The RPC is required to adopt a regional plan in accordance with the Act [24 V.S.A §4348]. Volume 1 and 2 of the Regional Plan are adopted together as one document.

C. The Regional Plan

The purpose of the Regional Plan, in accordance with the Act [24 V.S.A §4347], is to create a vision for coordinated growth and development in the Region in accordance with existing and future needs and resources. The Regional Plan is advisory in nature, purpose, and

effect. However, there are a limited number of areas where the Plan can have regulatory implications as discussed below. The Regional Plan is also used to support a host of grant applications including Community Development Block Grants and housing or farmland conservation applications to the Vermont Housing and Conservation Trust Fund.

The Regional Plan guides the RPC in evaluating public and private actions affecting the Region's communities and is the foundation for the RPC's annual work program. The Regional Plan also serves as the Region's basic planning manual and should be used as a guide by the Region's towns in the local planning process.

Because of the inherent interrelationship of all aspects of the Regional Plan, the policies in any section are not to be considered in isolation, but rather in conjunction with all other sections and chapters of the Regional Plan. Each section of the Regional Plan includes statements designed to guide the growth and development of the Region. These guiding statements are defined later in this chapter to help the reader understand the context in which they are used.

The format of the Regional Plan is intended to include all plan elements as required by law (24 VSA § 4348a). Volume 2 of the Regional Plan consists of the Regional Transportation Plan, which serves as both the statutorily required transportation element and the requirements of the RPC's Transportation Planning Initiative with the Vermont Agency of Transportation. Volume 1 includes all other required elements of the Regional Plan. Each chapter in Volume 1 focuses on particular issue areas of regional or statewide interest. Background issues, goals, policies, and recommendations are contained in each chapter. The final chapter of the Plan discusses implementation of the Regional Plan.

D. Use of the Plan in Regulatory Proceedings

The Regional Plan has a regulatory role under three state review processes:

- Act 250/District Environmental Commission Hearings (10 V.S.A., Chapter 151);
- Public Good Determination Hearings for electric generation or transmission facilities (30 V.S.A. §248, or "Section 248")
- Solid waste facility certification (10 V.S.A. §6605).

Major developments are reviewed for conformance with any duly adopted local or regional plan under Act 250 or Section 248. If, however, a conflict exists between the local and regional plans, the regional plan will be given effect over the municipal plan if a proposed development has a "substantial regional impact." See the Implementation Chapter for a definition of substantial regional impact.

The RPC works closely with its member towns in order to ensure that municipal plans are not in conflict with the regional plan. This synergistic relationship attempts to recognize potential concerns with Act 250 and Section 248 applications prior to their submission. In addition, the Land Use Panel of the Natural Resources Board that oversees the Act 250 process narrowly interprets "conflict" as only existing when one plan allows the project but

11. To develop a transportation system that balances the needs of safety, convenience, cost, energy efficiency, environmental protection, economic growth, and recreation.

12. To further the Vermont Planning Goals found in (24 V.S.A. §4302).

REGIONAL POLICIES

1. All inhabitants and wildlife should be provided with a healthy living environment through improvement and maintenance of the air, water, and soil quality.

2. Natural resource use that ensures the protection of sufficient renewable resources for future generations and provides for reasonable economic return should be supported.

3. Irreplaceable natural and fragile areas, outstanding water resources, rare and endangered species and their habitats, and significant scenic features should be protected and preserved.

4. Regionally significant natural, cultural, and archeological features, and historic sites and buildings should be protected and preserved.

5. Cooperation and coordination among member towns is encouraged in planning for growth and development, to enable an evaluation of the potential for regional and interjurisdictional impacts.

6. All appropriate agencies should cooperate in the development and maintenance of a safe and efficient regional transportation system that meets the vehicular and pedestrian needs of all residents with minimum impact to the Region's environmental and aesthetic qualities.

7. Environmentally benign or beneficial economic development that will provide desirable jobs for regional residents, reduce unemployment, improve per capita income, and maintain the character of the Region should be promoted.

8. Energy efficiency and conservation, the development of renewable resources, and the use of alternative energy sources are encouraged.

9. The manufacturing and marketing of local value-added agricultural and/or forest products is encouraged.

10. The provision and enhancement of recreational opportunities for all residents, and promotion of tourism-related economic development that furthers the goals of this Plan should be encouraged.

11. The protection of significant agricultural and forested land, through incentives and measures which discourage the subdivision or fragmentation of large parcels of such land is encouraged.

F. Energy

Back in August 2006, the Vermont Council of Rural Development held a Summit that addressed Vermont's concerns about global climate change, oil dependency, "peak oil," and perceptions of the growing challenge of national energy policies. Paralleling global and national security concerns were questions regarding Vermont's future energy supply (re-licensing the Vernon (now Vermont Yankee) Nuclear plant, future Hydro-Quebec contracts, and the high cost of gasoline and heating oil). The Summit was not organized to answer these challenges, but rather to consider ways to expand energy as an economic sector providing major opportunities in rural Vermont.

U.S. Senator Patrick Leahy opened the Summit, and called for a pro-active national policy to promote renewable energy and end America's dependence on foreign oil. At the state level, Governor Jim Douglas spoke of the importance of renewable energy to the future of the state and outlined the strong initiatives Vermont would be undertaking to address climate change, support biomass and agricultural generation, and advance efficiency and conservation. He supported Vermont's goal of producing 25% of its energy needs from renewable farm and forest resources by 2025.

It's been over two years since the Summit, and Vermont, as well as the Region, is still facing the same challenges. In addition, with recent dramatic increases in fuel and heating oil costs, Vermonters (as well as the nation) saw how such dependency on these resources affected their lives dramatically. The purpose of the energy chapter of the Regional Plan is to look at the Region's current energy consumption, conservation methods and initiatives member towns can take, and the numerous alternative energy resources that are available when considering future energy resources. There is no one solution that will solve all of the future energy challenges that we face as a region, state or a nation, however, exploring all options will hopefully provide more answers to fulfill our responsibility to the future.

G. Transportation

1. Transportation Trends

Vermont, being largely a rural state, is heavily dependent upon the automobile to meet the transportation needs of the state (see **Table 2.6**). All categories related to more motor vehicle use show significant increases between 1980 and 2000, outpacing general population growth and far outpacing increases in roadway miles. Automobile registrations increased by 53% while population grew only 19% in that twenty year period, suggesting that car ownership per person is increasing. A more than 76% increase in vehicle miles traveled, with only a 1.5% increase in miles or roads, indicates roads are experiencing much more use. The resulting wear and tear from this increased roadway traffic will be expensive to address. Preliminary reports suggest that travel in Vermont is decreasing since the price of gas reached $4.00 a gallon in 2008.

III. LAND USE

The manner in which inhabitants occupy and use land creates a complex pattern of development that affects the social, economic, and natural resources within and beyond the immediate area. Poor planning and unregulated land use can have negative impacts on communities in terms of the natural environment, quality of life, and local economic resources. Planning for the efficient use of land resources can result in the betterment of towns and the natural environment.

All towns in the Region have written comprehensive plans. In addition, many communities have enacted implementation measures such as zoning and subdivision regulations and created Conservation Commissions in an effort to address land use issues in a more comprehensive manner. However, communities throughout the Region are faced with problems such as insufficient funding, overburdened community facilities, rising real estate costs and property taxes, loss of revenue, lack of sufficient and accurate data and/or technical expertise, and unplanned or undesirable growth.

Planning efforts should place an emphasis on those characteristics that are unique to the Region. Most towns in southern Windsor County were developed in the traditional Vermont pattern of a compact village center surrounded by rural countryside. In order to maintain this pattern, economic growth should occur first in areas such as village or urban centers where infrastructure and vacant structures already exist and can accommodate additional growth. Above all, towns should continue to set the stage for their own development by planning for growth to accommodate the needs of current and future residents in keeping with the unique character of their town.

A. Land Use Trends

1. Historic Settlement Patterns

Historic sites and structures, utilities and facilities, community services, commercial and residential development, employment, transportation, recreational opportunities, farms, and other features are all woven together with the natural environment to make up the unique fabric of the Region. The predominant pattern of village centers surrounded by working rural landscapes reflects the history of the Region, and contributes to the quality of life that residents cherish. In general, the municipal plans in the Region seek to preserve these historic land use patterns. And, these patterns continue to form the basis for the land use goals, policies, and recommendations described later in this chapter.

Towns in the Region were first established in the mid- to late-1700s. Settlers came primarily from southern New England attracted by the availability of land and an abundance of natural resources. Settlement patterns were affected by access to waterways, agricultural soils, transportation routes, and protection from New England's severe climate. Those areas with rugged terrain were sparsely settled, while villages were settled primarily along rivers and streams, with farms around the perimeter. The Black River, the Williams River, and Mill Brook provided a major source of power for the Region's mills and encouraged industry to develop along the waterways. Larger settlements occurred in towns such as Windsor in the

Benefits of designation include regulatory and financial incentives for growth centers, such as:

- Off-site mitigation of primary agricultural soils at lower mitigation ratios;
- Streamlining the Act 250 review process by allowing for a master plan permit for the growth center;
- The ability to create Tax Increment Financing (TIF) district(s) within growth centers to fund infrastructure improvements;
- Priority consideration for funding, including state public facility improvements, wastewater facility improvements, brownfields remediation, Community Development Block Grant (CDBG) program implementation grants, Downtown Transportation Fund, Transportation Enhancement improvements, and housing renovation and affordable housing construction programs.

e. Vermont Neighborhoods Program

In 2008, Act 176 was enacted creating the Vermont neighborhoods program, which seeks to stimulate new housing development in areas within and surrounding designated downtowns, village centers, new town centers and growth centers. The program is administered through the Department of Housing and Community Affairs in coordination with the Natural Resources Board. The Downtown Development Board reviews and approves Vermont neighborhood applications in accordance with 24 V.S.A. §2793d. Benefits include the relaxation of Act 250 regulations, exemptions from the land gains tax and reduced permit fees. There are no designated Vermont neighborhoods in the Region.

Statutory Definitions per 24 V.S.A. § 2791:

Growth Center: means an area of land that is located either in or adjacent to a designated downtown, village center or new town center as approved in a town plan; will accommodate the majority of growth anticipated over a twenty-year period; and contains a mix of uses in an urban density consistent with 24 V.S.A. § 2791(12)(B). Noncontiguous lands might be allowed where natural or physical constraints exist as long as it is necessary to accommodate future growth and the combined growth center area functions as a single integrated area.

Vermont Neighborhood: means an area of land that is in a municipality with an approved town plan, a confirmed planning process, zoning bylaws and subdivision regulations; and is in compliance with the following:

- Located either within a designated downtown, village center, new town center or growth center, or an area outside but contiguous of the above designated districts and is not more than 100% of the total area of the downtown district, 50% of the village center district, or 75% of the new town center;
- Contiguous lands compliment the designated districts by integrating new housing and provide the infrastructure and density criteria in § 2791(15)(B).

B. Future Land Use

1. Future Land Use Map

For the purposes of this Plan, the following future land use categories have been established. These categories are defined below and depicted on the Future Land Use map (**Appendix A - Map 3**).

- Regional Centers;
- Town Centers;

The industrial site located along Clinton Street in Springfield immediately southeast of the Springfield Regional Recreation Center is intended for redevelopment, allowing for a mix of uses but primarily targeting future industrial uses for local jobs.

g. Rural

Most land in the Region lies outside of the areas designated for concentrated growth. Rural areas support a variety of different land uses, including low-density residential, small-scale commercial and outdoor recreation. These areas are rural in character and are generally valued for environmental and recreational uses as well as for the primary purpose as a working landscape, which includes agricultural, forestry and earth extraction uses. These working landscape activities contribute to the economy by providing jobs in the natural resource sector as well as attracting tourists who want to take advantage of the recreational opportunities. The RPC shall review Act 250 applications for earth extraction operations on a case-by-case basis for positive benefits for the Region as well as negative impacts on the environment, infrastructure and adjacent land uses. Development within rural areas is largely dependent upon local regulations and site limitations, including but not limited to the suitability of the soils, the presence of floodplains, and distance from community facilities and services.

It is in the interest of the Region that rural character shall remain the dominant feature of these rural areas. Rural character includes significant amounts of open space, compatible building styles, low-density residential settlements, lightly traveled two lane roads, and numerous agricultural and forestry operations.

Much of the recent development in the Region has occurred in rural areas even though it is encouraged in designated areas of concentrated development.

Development in rural areas should avoid sprawl and strip development land use patterns. Small-scale commercial uses are encouraged in nodes or clusters, rather than in a linear development pattern along major roadways. Residential uses are encouraged, but should be clustered or built along the periphery of important fields and other natural resources in order to minimize negative impacts. Large developments are encouraged to employ innovative site designs, such as planned unit developments (PUDs) and/or "crossroads hamlet" land use patterns, in order to cluster residential units, minimize road networks and limit site disturbances. Traditional hamlet patterns are emphasized over suburban, gated or cul-de-sac patterns.

h. Resource

Resource areas represent natural areas that require protections because of their fragile nature, irreplaceable value, and unique or important ecological functions. These areas consist of the following sub-groups:

(1) High elevation areas over 2,500 feet in elevation;

(2) Steep slopes in excess of 25 percent gradient;

(3) Class 1 and 2 wetlands;

(4) Permanently conserved lands, both public and private;

(5) FEMA-designated floodways;

(6) Critical wildlife habitat areas and wildlife travel corridors as mapped by the Department of Fish and Wildlife; and

(7) Prime agricultural soils (as defined by the USDA).

Resource areas are generally more remote than rural areas. A combination of conserved lands and a working landscape that allows for outdoor recreation, hunting, forestry and agricultural activities are encouraged. As in rural areas, the RPC shall review Act 250 applications for earth extraction operations on a case-by-case basis for positive benefits for the Region as well as negative impacts on the environment, infrastructure and adjacent land uses. Residential or commercial buildings are discouraged. Very low-density residential uses shall cluster or locate at the periphery of natural resource areas in order to minimize negative impacts. All land uses, including roads and utilities should avoid fragmenting large blocks of forested lands, wildlife habitat and wildlife travel corridors. High elevation areas should remain as predominately wilderness areas, but wind energy and telecommunication facilities may be allowable if the facilities and access roads minimize impacts on natural resources and aesthetics.

C. Special Considerations in All Land Use Categories

1. Supporting Traditional Land Use Patterns

As the Region's population and economy grows and expands, each community will be affected differently. Factors such as geographic location, natural resource constraints, regulations, public policy, and public investments contribute to the direction that new growth takes in any community. The future land use categories described above are intended to support traditional land use patterns, be consistent with the state planning goals, and incorporate "Smart Growth Principles" as defined in state statute.

The future land use categories do not mean that all growth should only occur in regional centers and not in rural areas. Rather they reflect a regional policy that intensive development should occur first in those communities best able to accommodate it, and in the appropriate densities to maintain the traditional land use pattern. They also reflect a regional policy that scarce public funding for improvements in infrastructure should be directed in ways that support the current and desired scales of growth. For example, a large-scale investment in wastewater or pedestrian facilities would be more appropriately made in a regional center than in a rural area. Furthermore, these categories reflect a regional policy to prioritize the reinvestment in villages and brownfield sites over greenfield development in rural or resource areas.

2. Resource Protections and Working Landscape

The rural and resource areas were developed in order to protect specific natural resources and traditional rural economic activities. However, there are several important resources that may occur within any of the land use categories, and which merit special attention and protection. They include: Public Water Supply Source Protection Areas; FEMA-designated floodplains; slopes between twelve and twenty-five percent gradient (12 - 25 %); vegetated

areas next to surface waters; Class 3 wetlands and vernal pools); Natural Heritage Inventory sites; regionally significant historic sites; and other locally defined sensitive natural areas and scenic resources. Development should avoid or minimize negative impacts to these resources.

3. Interstate Interchanges and Major Highway Corridors

There are two Interstate 91 interchanges: Exit 7 in Springfield and Exit 8 in Ascutney; both are discussed in more detail in the Regional Transportation Plan (RTP, Volume 2 of 2). Interchanges are prime areas for development due to their generally favorable site conditions and easy access for trucks and the traveling public. These areas also serve as gateways to the Region. In many locations throughout the country, interstate interchanges have experienced unplanned strip development which negatively impacts: the capacity and safety of the highway system, aesthetic and natural resources in these areas, and the economic and cultural viability of traditional villages.

Executive Order 07-01 was signed by the Governor in 2001 to encourage land uses at Vermont interchanges to be consistent with state land use goals. In 2004, the RPC developed Interstate Exits of the Region: Study and Policies that is discussed in more detail in the RTP. The Town of Weathersfield developed the I-91 Exit 8 Interchange Master Plan in 2008, which recommends incorporating the current strip commercial development along Exit 8 into the village of Ascutney through improved local regulations, including access management, roadway and pedestrian connections, and site plan review standards. The Town of Springfield created an Exit 7 zoning district to accommodate services for the traveling public, while also protecting major highway systems and not competing with downtown businesses. Development in interchange areas should be consistent with these initiatives and local regulations.

State highway corridors and intersections form the transportation network that is essential for access to jobs, services and emergency services. Poorly planned adjacent land use developments and access management can have a detrimental effect on these highway systems. The functionality of interstate interchanges and the state highway network should be preserved to maintain or improve capacity and safety, reduce vehicular delays and to not preclude future intersection expansion needs.

4. Energy Conservation

Effective land use planning should promote energy conservation. The future land use categories are, in part, established to encourage energy conservation by concentrating development in smaller, dense village areas with a mix of uses that encourage travel by walking, bicycling and public transportation, and reduces the energy required to provide town services.

The siting, design and construction of buildings significantly influences the energy demands for heating, cooling and lighting the structure. Innovative site designs - through building orientation, construction and landscaping - are encouraged to take advantage of solar heating and passive cooling in order to reduce energy demand otherwise used for traditional heating and cooling systems. Energy efficient lighting, such as LED fixtures, is encouraged to

reduce electricity consumption. See the Energy Chapter for more discussion on energy conservation.

LAND USE GOALS

1. To preserve the historical development pattern of mixed-use urban and village areas surrounded by open land, agriculture, forest, and low-density residential use.

2. To direct growth and development toward areas of the Region where it will be most effective and efficient to provide the necessary public infrastructure and services.

3. To achieve the concentration of infrastructure development within areas determined by town plans as desirable for growth.

4. To establish land uses and land use patterns that protect and enhance the values defined in this chapter.

5. To provide a regional transportation system that encourages and complements historic land use patterns.

LAND USE POLICIES

1. Development should be consistent with the future land use categories and map.

2. Revitalization of downtown areas, including the appropriate use, maintenance and reuse of existing historic structures and other existing buildings whenever possible, should be encouraged.

2. Excessive commercial development along major transportation routes (i.e., strip development) is discouraged. Access management and innovative commercial development that maintains the characteristics of existing villages, hamlets, and towns is encouraged.

3. Towns are encouraged to adjust zoning and subdivision regulations to allow for densities that protect or enhance the existing settlement patterns and resources.

4. In order to maintain the existing settlement patterns, higher density residential, commercial, and industrial development should be located in Regional Centers, Town Centers, and areas identified as desirable for growth in municipal plans.

5. Town efforts to attract and locate viable and appropriate businesses in areas targeted by the town for growth should be supported.

6. Where towns support residential, resort, and mixed use development tailored to the tourist and ski industries, such development should be sited and designed to protect the settlement patterns and natural resources of the town and Region.

7. Priority for the use of public funding for the maintenance or improvement of infrastructure shall be for those that support concentrated development in Regional, Town and Village Centers.

8. Use of public funds for the development of affordable housing and assisted living facilities within Regional, Town and Village Centers shall be supported.

9. Use of public funds for the conservation of natural resources is encouraged.

10. Local efforts to encourage compatible development adjacent to significant natural resources (waterways, large forested areas, wildlife habitat, etc.) by requiring buffer strips, visual screening, and other mitigation devices should be supported.

11. The RPC should assist towns to eliminate or mitigate the effects of development on natural resources that extend beyond town borders or are considered regionally significant as determined by the affected towns and the Region.

12. The placement of municipal and other government buildings should be in established downtown and village centers in order to maintain and encourage the vitality of downtown areas.

13. Programs that help owners of farm and forestland bear the financial responsibility of resource protection should be supported.

LAND USE RECOMMENDATIONS

1. Help towns to evaluate proposed development projects for possible adverse effects to important natural resources, both within and beyond town borders.

2. Work with communities to develop a process for designation of growth centers.

3. Assist communities with developing effective bylaws, including zoning and subdivision regulations, that are consistent with the purpose and intent of their town plans and that consider the needs and plans of adjacent towns and the Regional Plan.

4. Support town, public, and private conservation organizations in protecting significant cultural resources, farmland, forestland, shorelines, and significant plant and animal species and their habitat.

5. Encourage state and federal agencies to contact local planning commissions and the RPC when considering the location or relocation of government buildings.

Most of the forested land in the Region is in private ownership. Vermont's Use Value Appraisal (or Current Use) Program has been successful in bringing a large amount of private forestland in the Region under sound management plans. (See **Table 6.1** summarizing enrollment in the Current Use Program.) Even if left forested, small lots in multiple ownerships can be difficult to effectively manage; recreation access and timber production can be reduced due to differing objectives of landowners.

Towns are encouraged to plan for the protection of large areas of important forested land. By developing open space plans, Forest Land Evaluation and Site Assessment (FLESA) or encouraging planned unit development that encourage higher density development while protecting valuable open space, municipalities can ensure that large tracts of forestland remain contiguous. Local planning and conservation commissions may also take advantage of state and nonprofit organizations that can assist with incorporating forest resource planning into comprehensive plans.

Table 6.1 Southern Windsor County Current Use Program

Town	Total Acres	Forest	Non-Productive* Forest	Agricultural	Total Enrolled Acres	% of Total Acres
Andover	18,432	2,995.7	45.75	316.03	3,357.48	18.2
Baltimore	3,002	997.8	4.0	146.7	1,148.50	38.3
Cavendish	24,832	2,934.03	67.26	390.2	3,391.49	13.7
Chester	23,040	11,463.11	140.59	1,101.61	12,705.31	55.1
Ludlow	21,704	2,458.52	20.55	194.89	2,673.96	12.3
Reading	26,624	8,187.88	147.10	705.41	9,040.39	34.0
Springfield	31,557	7,270.33	148.21	2,080.09	9,498.63	30.1
Weathersfield	29,292	5,189.71	113.95	1,519.63	6,823.29	23.3
West Windsor	15,808	1,318.59	39.9	362.47	1,720.96	10.9
Windsor	12,544	1,799.02	58.7	656.46	2,514.18	20.0

* Conditions which cannot adequately support that use due to steep slopes, ledge, or wet soils.
Source: State of Vermont, Division of Property Valuation and Review, 2002

In 2007-2008, as part of a Municipal Planning Grant (MPG), the Reading Planning Commission, with assistance from the RPC and in conjunction with a statewide effort sponsored by the Vermont Natural Resource Council (VNRC) and Vermont Forum on Sprawl (now Smart Growth Vermont), developed policies and regulations that could help control the fragmentation of their important forestlands. The final report documents the process of mapping priority lands, lays out issues associated with forest fragmentation, identifies a range of policy options, and recommends specific town plan and zoning changes for Reading that will inform a larger campaign of the VNRC. In addition to developing

planning strategies for towns to address the problem of forest fragmentation, VNRC's campaign looked at workable tax relief and other landowner incentive programs to reduce forest fragmentation and promote the ability of forest landowners to hold onto their land.

2. Timber Production

Managing privately owned forestland for timber production has become a more significant part of the state and regional economies as forest cover has increased over the past 20 to 30 years, and over 80% of the forest land in the state is privately owned. When done carefully, logging is the kind of natural resource-based industry that furthers regional goals concerning open space, wildlife habitat, air and water quality, scenic resources, access to recreation, and the tourism economy. Logging operations that are based on sound management plans, follow Vermont's Acceptable Management Practices, and help conserve valuable forest, air, water, wildlife, and recreation resources should be supported, especially when they contribute to regional forest products industries. Realizing an economic return on forestland through responsible timber harvesting is a legitimate tool for maintaining the integrity of large forested tracts. Owners of private forestland should be encouraged to continue the recreational opportunities they provide and to work together to manage contiguous wood lots and recreational trails.

3. Forest Legacy Program

Vermont participates in the Forest Legacy Program (FLP), a Federal program that supports State efforts to protect environmentally sensitive forest lands. Designed to encourage the protection of privately owned forest lands, FLP is an entirely voluntary program. To maximize the public benefits it achieves, the program focuses on the acquisition of partial interests in privately owned forest lands. FLP helps States to develop and carry out their forest conservation plans. It encourages and supports acquisition of conservation easements, legally binding agreements transferring a negotiated set of property rights from one party to another, without removing the property from private ownership. Most FLP conservation easements restrict development, require sustainable forestry practices, and protect other values. In Vermont, the Vermont Department of Forest, Parks and Recreation has conserved approximately 53,000 acres in Vermont through the FLP.

4. Public Forest Lands

The Region also has a substantial amount of publicly-owned forestland (see **Table 6.2**). In addition to several town forests and land owned by the U.S. Army Corps of Engineers, a large amount of forestland is owned by the State of Vermont. The state-owned forest in the Region is managed under the concept of integrated use, a strategy of land management that considers public needs and the capabilities of the land to meet those needs. There are two State parks with camping facilities and trail networks. There are seven Wildlife Management Areas (WMAs) in the Region: Hawks Mountain, Knapp Brook, Tiny Pond, Arthur Davis, Little Ascutney, Weathersfield, and Skitchewaug. While originally purchased specifically for hunting, today WMAs emphasize conservation of wildlife and fish habitat. Unlike Vermont State Parks which focus equally on recreation and conservation, WMAs attempt to provide visitors recreation opportunities through conservation. Some state land is leased to private companies for use as alpine ski trails. Most of the state forestland in the Region is managed for multiple uses, including hiking, snowmobiling, hunting, fishing, and skiing, and much of it is managed for timber production through controlled harvests as part of long-term

2. Habitat

A diversity of habitat types is needed for the continued existence of the various fish and wildlife species that inhabit the Region. A major deterrent to their survival and proliferation is the impact of human development on the natural environment. Although most development in this Region is done on a relatively small scale, cumulative development efforts can have a major impact on wildlife habitat. As people move to the Region the development of new single-family housing outside of villages is increasing. This growth pressure in rural areas is having a detrimental effect on large, contiguous blocks of wildlife habitat, including forest land, fields and other open spaces. Scattered, small-scale development causes fragmentation of these habitat areas, potentially diminishing or eliminating the land needed to support some species. A diversity of healthy populations can only be achieved through maintaining variety in the types of habitat available. Conservation of a diverse mix of natural areas and attention to connections between large tracts of wildlife habitat is necessary in order for a diverse and healthy wildlife population to survive and flourish. The following sections describe some important habitat types that may be found in the Region.

Large mammals such as moose, bear, deer, bobcat, and a variety of other animals including wild turkeys and grouse, rely on large contiguous areas of forests, fields and other undeveloped lands for food, shelter, breeding grounds and migratory stop-overs. The fragmentation of such land can result in decreases in the number of species as well as the sizes of populations of many species. A variety of songbirds reside in wooded areas that are characterized by less intense human use. In the Region, species may include red-eyed vireo, scarlet tanager, rose-breasted grosbeak, warblers, thrushes, white-throated sparrows, wrens, and many others.

Through Act 250, some protection is available for wildlife habitat areas under Criterion 8(a) - Wildlife Habitat and Endangered Species, which provides a detailed system to weigh evidence for a project and determine if a permit can be allowed.

Appendix A - Map 6 shows wildlife habitat areas identified by the VFWD and depicts blocks of undeveloped land that are likely to provide habitat for a variety of wildlife. Not only is minimizing the negative impacts of development on these large blocks of habitat important, but so is protecting wildlife travel corridors that connect these blocks. The boundaries of existing deer wintering areas and bear habitat have also been mapped, but are subject to change due to fluctuations in environmental conditions. These mapped areas are based on statewide data sources, so reviewing a development proposal for a specific site may require consultation with the VFWD or other qualified wildlife scientists to determine actual critical habitat areas and identify mitigation options.

a. Deer Wintering Areas

In winter months, deer tend to congregate in certain coniferous woods on western and southern slopes where they are protected from the wind and cold temperatures, and where they are offered greater mobility when searching for food. The greatest limiting factor on the size of the deer herd in the state is the quality and availability of the winter habitat. As stated in the VFWD's publication, *White-tailed Deer Management Plan, 1997-2006*, Vermont nearly lost its white-tailed deer population in

In addition, on September 12, 2007, the U.S. District Court for the District of Vermont decided against a group of automobile manufacturers challenging Vermont's vehicle emissions standards for greenhouse gases. In August of 2005, the Vermont Air Pollution Control Division introduced an amendment to Vermont's vehicle regulations. The amendment would require the State to adopt California's proposed greenhouse gas emissions standards for motor vehicles. The standards would be gradually phased in between model-years 2009 and 2016, and by model-year 2016, would require reductions of tailpipe greenhouse gas emissions from new motor vehicles of approximately 30 percent. Vermont and 13 other states are poised to adopt the California standards.

Regional and local planning commissions should address vehicle emissions problems through the planning of transportation networks to prevent congestion and through the promotion of public transportation and bicycle and pedestrian travel. Section 108(f) of the Clean Air Act lists Transportation Control Measures to reduce mobile source emissions (see Appendix C). States whose air quality fails to meet the NAAQS are required to implement various combinations of these measures in an attempt to improve air quality. See Volume 2: Southern Windsor County Regional Transportation Plan for additional discussion.

As discussed in the Energy Chapter, Vermont's primary energy sources produce very little air pollutions as protected by the U.S. EPA. The contract for electricity from HydroQuebec expires in 2012, and the operating license for Vermont Yankee expires that same year. Any other potential new and/or replacement energy plants should strive to not negatively impact air quality.

By-products from woodstove combustion may cause poor air quality in some areas, depending on topography and weather patterns. Federal law requires that new woodstoves contain clean burning combustion systems or catalytic converters; however, older stoves and outdoor-burning woodstoves (mounted on the exterior of a building) are exempt from such requirements. The state is considering rules regarding outdoor-burning woodstoves; municipalities or regions that have noticeable air quality problems related to wood burning may wish to address such issues at the local level.

For additional discussion on air quality issues and climate change, please refer to the Energy Chapter.

AGRICULTURE & FOREST RESOURCE GOALS

1. Encourage the conservation, wise use and management of the Region's agricultural and forestry resources, to maintain its environmental integrity, and to protect its unique and fragile natural features.

2. Expand the agricultural and forestry economies by coordinating planning, zoning, and economic development activities with member communities and organizations.

3. Protect the Region's rural character and working landscape.

4. Sustain agriculture and forestry in those areas of the region where they are predominant land uses, and where soils, and other conditions enable them to remain economically viable.

5. Reduce fragmentation of forest and agricultural lands.

6. Protect and preserve the character and integrity of both significant public and private forest lands.

AGRICULTURE & FOREST RESOURCE POLICIES

1. Encourage measures that balance supporting land-based economies, protecting agricultural and large blocks of forested lands, with supporting development in or near town centers.

2. Work with landowners to create vegetated buffers between farmland and surface waters in the interest of protecting water quality as well as agricultural property.

3. Agricultural land and forested land form the separations between town centers, villages, and hamlets in the traditional regional settlement pattern. Tangible efforts shall be made to preserve this patchworked balance of open and forested space, to promote compact settlements through creative regional planning, municipal planning, private initiatives, purchases, leases and transfers of development rights and efficient site designs. Contiguous forest and significant agricultural areas shall remain largely in non-intensive uses unless no reasonable alternative exists to provide essential residential, commercial and industrial activities for the region's inhabitants.

4. The construction of utilities, roads or other land development should skirt tracts of productive agricultural and forest land rather than divide them.

5. Large tracts of economically viable Primary and/or Secondary Agricultural Soils located outside of downtowns, villages and other locally designated growth areas should be protected for current and/or future agricultural use. Development in these areas shall utilize innovative site designs (e.g. clustering, planned unit developments, etc.) in order to minimize negative impacts and preserve the agricultural viability of these soils.

6. Development within downtowns, villages and other locally designated growth areas should be allowed on areas of Primary and/or Secondary Agricultural Soils, if supported in the town plan, but shall use innovative site designs to minimize negative impacts and shall be required to maintain a small tract for future small-scale agricultural use or community garden.

7. State or federal programs and legislative efforts which protect and enhance the economic, cultural, environmental, and aesthetic values of agricultural and forest lands should be supported.

8. Support productive, sustainable forestry on large lots, contiguous blocks of forested lands, and forested corridors linking large tracts of forest lands, and maintain accessibility to those lands. Doing so will contribute to maintaining the ecological values and economic vitality of these forested areas.

9. Proposed roads or utilities should be sited to cause minimal negative impact to forest contiguity and aesthetics.

10. Where important natural features, soil conditions, or special resources including, but not limited to, agricultural and forested land are identified, clustered or peripheral development is required to protect such resources and prevent fragmentation and sprawling settlement patterns.

11. Encourage appropriately sited and designed businesses promoting the local processing, sale and distribution of native raw materials and products. Planning and regulatory review at the state and local level should not unduly restrict the development of "home cottage" industries which complement farm and forestry.

12. State-adopted Accepted Agricultural Practices and Acceptable Management Practices shall be used in agricultural and forestry activities, implementation of Best Management Practices (BMPs) are encouraged in such operations, and point and non-point source pollution shall be minimized.

13. Conservation of agricultural and forested lands through the use of public/private funds for the purchase of development rights, fee simple purchase, and other such measures is encouraged.

14. The RPC recognizes that certain local land development or subdivisions may conflict with policies to minimize the loss of existing or potential agricultural or forest resources. Furthermore, the RPC acknowledges that in certain areas agricultural or forestry uses may no longer be viable due to a variety of factors including;
(a) The existence of or planning for roads or sewers in the immediate area which dictate that involved land should be converted to more intensive uses; and.
(b) The presence of parcel sizes or site conditions which affirm that conservation efforts to minimize loss of the resource result in marginal public benefit.

15. It is the policy of the RPC to minimize or mitigate the loss of these resources to development. As an alternative to conventional methods, the RPC endorses use of off-site mitigation techniques to offset the loss of these resources. However, endorsement of off-site mitigation should be conditioned on finding that the project proposal is:
(a) Consistent with this Plan and the plans of affected municipalities; and
(b) Provides an equal or greater public benefit than conservation of the development site itself.

AGRICULTURE & FOREST RESOURCE RECOMMENDATIONS

1. Inventory and prioritize agricultural lands using the Land Evaluation Site Assessment (LESA) and Forest Land Evaluation and Site Assessment (FLESA).

2. Provide planning advice and support to Planning Commissions, Conservation Commissions, non-profit conservation organizations, and other groups interested in sustaining agriculture and forestry.

3. The RPC will evaluate proposed developments involving Primary Agricultural Soils and forest lands, and their related industries. Where appropriate, it will provide information to federal and state agencies, town boards and commissions, and other parties regarding the probable impacts these resources have on the welfare of the region.

4. Encourage the location of local farm and forest product industries in the Region where such industries would benefit the community and the Region.

5. Assist in mediation efforts when disputes arise concerning regionally significant agricultural or forested lands.

6. Work with various federal, state, local and non-profit agencies to disseminate information related to agricultural and forest management and develop planning policies and regulations.

WILDLIFE GOALS

1. Preserve or enhance the biodiversity and population of wildlife, including natural predators, by minimizing development impacts on large blocks of habitat and wildlife travel corridors.

2. Maintain or improve water quality necessary to sustain existing aquatic communities.

3. Support recreational activities, fishing and hunting done in an ecologically sound manner providing for the continued success of wildlife species and their habitat.

4. Combine recreation and wildlife corridor uses to develop a greenways network in the Region.

5. Encourage the use of the Region's forested land as both working landscapes along with wildlife habitat.

6. Protect rare, threatened, and endangered species and their habitats.

WILDLIFE POLICIES

1. Support local efforts to inventory and map large contiguous blocks of wildlife habitat and associated connecting lands that serve as wildlife travel corridors.

2. Development should be designed and sited in a manner to preserve contiguous areas of active or potential wildlife habitat by clustering, building to the periphery of habitat areas and/or planned unit developments. Corridors connecting habitat areas for large mammals must be incorporated in plans for management and conservation of forested areas. Fragmentation of significant and necessary wildlife habitat should not be approved.

3. Large contiguous tracts of forest should be managed to maintain the diversity of ages and species of tree cover necessary for shelter and food supply for deer, black bear, and other large mammals, and birds.

4. Critical habitat types in the region that shall be considered during development planning include, but are not limited, to the following as identified by the Agency of Natural Resources:
   (a) Forested corridors or "greenways" used by songbirds during migration;
   (b) Open fields;
   (c) Cliff areas or rock outcroppings identified as habitat for peregrine falcons, bobcats or other wildlife;
   (d) Areas over 2,500 feet in elevation; and
   (e) Large tracts of contiguous forest land.

5. Vegetated buffer areas along stream and river banks should be encouraged in development plans in order to provide shade and mitigate the negative impacts of sedimentation and nonpoint source pollution on aquatic habitat.

6. Efforts to monitor and, where necessary, to mitigate the effects of hydroelectric facilities, dams and sewage treatment plants on important aquatic species shall be encouraged.

7. Support federal, state and local governments and conservation group acquisition of land and/or conservation easements that protect critical wildlife habitats.

8. Support federal, state, regional and local programs and initiatives that educate and encourage private and public landowners to recognize the importance of protecting and enhancing fish and wildlife habitats and ecosystems.

WILDLIFE RECOMMENDATIONS

1. Assist communities in addressing wildlife and habitat issues in town plans and implementation documents.

2. Coordinate with local communities and the Department of Fish and Wildlife, to ensure proper implementation of protective policies.

3. Develop significant wildlife habitat protection and water withdrawal policies that can be used as guidelines for communities and developers.

- areas of high scenic quality such as ridgelines which are publicly recognized as exceptionally unique or are noted examples of the dominant characteristics of an area in the Region.

In addition, the diversity of landscape types; the size, scale, and architectural continuity of the manmade landscape; the focal dominance; and the intactness of the landscape are likely to contribute to the scenic qualities of an area.

4. Planning for Open Space

"Open space" may be defined as land which is not developed and is of some benefit to the public for many of the reasons described throughout this chapter and the Natural Resources chapter. Open space that is publicly owned or permanently protected through the sale or donation of development rights may ensure the long-term productive capacity of forest or agricultural land; preserve wildlife habitat; protect groundwater resources; provide recreation land; and preserve important historic, scenic and cultural resources.

Open space may be land that is conserved either through fee simple acquisition by local, state, or federal government or through the sale or donation of development rights to local government or a nonprofit conservation organization, often using a conservation easement which limits development on land while keeping it available for farming, forestry, and recreational enjoyment.

The Upper Valley Land Trust (UVLT) is located in Hanover, New Hampshire, and provides conservation leadership, tools and expertise to permanently protect the working farms, forested ridges, wildlife habitat, water resources, trails and scenic landscapes that surround residential areas and commercial centers. UVLT focuses its mission in 44 Vermont and New Hampshire towns (including Springfield, Weathersfield, Windsor, West Windsor and Reading) in the upper Connecticut River valley. UVLT is a sponsor member of the Land Trust Alliance, an organization that promotes land conservation by providing advocacy and professional resources to over 1600 land trusts nationwide.

In addition, the Vermont Land Trust (VLT) is one of the most effective land trusts in the country. Its primary focus is on permanently conserving productive, recreational, and scenic lands vital to Vermont's and rural economy and environment. VLT has helped landowners in communicates throughout Vermont, to permanently protect more than 483,000 acres – 8% of Vermont's privately-owned land. **Table 7.3** below lists conserved lands in the Region.

Open space may also be privately owned agricultural or forestland, which offers economic benefits through productive use and may contribute to the scenic nature of the landscape or be accessible for recreation. Owners of such land may be encouraged to maintain its productive capacity through programs such as Local Tax Stabilization agreements for farmland, forest land, or open space; or through the state's Use Value Appraisal Program, commonly referred to as "Current Use", which requires towns to assess enrolled farmland or forest land at use value rather than fair market value. Fear of liability often causes landowners to prohibit public access for recreational uses; however, legislation enacted in

Table 7.3 Conserved Land in Southern Windsor County

Town	Total Acres	Conserved Acres*	% of Total
Andover	18,432	1,091.20	5.9%
Baltimore	3,008	N/A	N/A
Cavendish	25,344	202.90	.8%
Chester	35,766	230.00	.64%
Ludlow	22,912	29.00	.13%
Reading	26,560	951.59	3.6%
Springfield	31,552	364.90	1.2%
Weathersfield	28,032	2,074.63	7.4%
West Windsor	15,808	741.41	4.7%
Windsor	12,544	768.04	6.1%

Source: State of Vermont Tax Department, Property Valuation and Review, August 2001
* Includes Development Rights and Fee Simple Transactions

1997 protects a landowner from such liability, 10 V.S.A. §5791-5795. This may encourage landowners to make their land available to the public for hunting, fishing and other recreational uses.

In order to ensure that open lands that provide the greatest public benefit are protected for present and future generations, towns are encouraged to develop open space plans. Open space development is gaining favor as an alternative to large-lot zoning, which swallows up land and leads to sprawl. By clustering lots of smaller sizes and leaving large areas of open land to be enjoyed by residents, these "conservation subdivisions" can actually lower infrastructure costs for developers and produce other economic incentives, while preserving open space. Open space design can help to encourage a better sense of community as well as preserve the aesthetics we value so highly in Vermont. For more on this topic see the Land Use chapter.

CULTURAL/HISTORIC RESOURCE GOALS

1. To ensure the preservation, maintenance and enhancement of significant cultural and historic resources throughout the Region.

2. To promote the historical and cultural heritage of the Region.

3. To develop a policy on significant regional viewsheds.

CULTURAL/HISTORIC RESOURCE POLICIES

1. Towns are encouraged to inventory and prioritize local resources to protect significant cultural and historic resources in their town plans and implementation documents.

2. Proposed development adjacent to or within significant historic or cultural sites should be compatible with the resources, and should enhance their historic value and appreciation where possible.

3. Efforts of community, regional, state, and federal organizations which sponsor or provide financial or technical assistance for cultural and historic preservation and education in the Region should be supported.

4. Reuse of historically significant buildings and sites that maintains and preserves their architectural and historic character is encouraged.

5. Regionally significant historic buildings and sites should be preserved. Necessary renovations should reflect the historic character of the resource. In the case of private homes, owners are encouraged to consider the site's historic, cultural, and economic value to themselves and the community when deciding how best to maintain and manage them.

6. Encourage towns, through their Planning Commissions and on-site visits, to educate the public and promote awareness of significant cultural/aesthetic resources, such as cellar holes and stonework, etc.

CULTURAL/HISTORIC RESOURCE RECOMMENDATIONS

1. Work cooperatively with local communities to inventory and map significant cultural and historic resources to ensure their protection.

2. Work with communities to develop criteria for evaluating the impacts that projects may have on designated historic sites or districts.

3. Continue to support cooperative efforts to designate National Historic Register Sites and Districts and evaluate federally funded projects in the Region that impact designated properties and resources.

4. Support the development of programs focusing on local, regional, and state history and culture in the Region's schools.

5. Provide support for towns wishing to include design control districts or local historic districts in their zoning bylaws under 24 V.S.A. §4407.

SCENIC LANDS AND OPEN SPACE GOALS

1. Achieve a balance between scenic or open land uses and other land uses in the best interest of the environment and the Region's residents.

2. Maintain or enhance the diversity of ecosystems throughout the Region and promote connectivity between conserved lands wherever possible.

3. Protect the environmental character and integrity of significant natural and scenic resources as identified by member towns.

SCENIC LANDS AND OPEN SPACE POLICIES (*see also Natural Resources Chapter*)

1. Local, state or federal programs and legislative efforts which protect and enhance the economic, cultural, environmental, and aesthetic values of forested and scenic resources should be supported.

2. Local Tax Stabilization (Current Use) programs that provide incentives for landowners to conserve farmland, forestland, and open space should be supported.

3. Towns should be encouraged to develop policies that promote clustering or other development patterns that will maximize forested areas and open space.

4. Conservation of open and scenic lands through the use of public/private funds for the purchase of development rights, fee simple purchase, and other such measures should be supported.

5. The preservation of historic and archeological resources that enhance the significant scenic resources of the Region should be supported.

6. Development projects which complement or enhance significant scenic resources should be supported.

7. The following sites are inherently and especially sensitive, and as such, development in these areas is discouraged:

   - Hawks Mountain in Cavendish, Baltimore, and Weathersfield
   - The Alps region of Cavendish and Reading
   - Little Ascutney Mountain in Weathersfield and West Windsor
   - Terrible Mountain in Andover and Ludlow
   - The Pinnacle in Ludlow

8. Towns should be encouraged to develop policies for the protection of regional scenic viewsheds.

9. Structures and exterior areas should be illuminated only at levels necessary to ensure safety and security of persons and property.

10. Encourage exterior lighting that is designed so that light projects downward and is shielded from public roads, adjacent residences, and distant vantage points.

11. Encourage additional scenic byway designation where appropriate.

SCENIC LANDS AND OPEN SPACE RECOMMENDATIONS

1. Work with local communities to identify and develop a comprehensive inventory of forested lands, open space, and significant scenic resources throughout the Region,

and analyze the results. Assist communities in developing conservation strategies for locally and regionally significant scenic resources.

2. Work with member towns and appropriate agencies to secure donations or acquisitions of scenic easements, greenways segments, forested land or other land and water areas that will enhance the significant scenic resources of the Region.

3. Continue to work with, and assist in the development of, local Conservation Commissions.

4. When the opportunity arises, work with local organizations, neighboring regional planning commissions, and state entities to evaluate certain roadways and corridors for Vermont Byway designation suitability.

5. Assist member towns to update town plants and implementation measures which protect and preserve the landscape heritage in the Region.

scenic quality (focal points, viewer sensitivity, topographic diversity, prominence/dominance, order of landscapes and patterns of development);

(b) proposed projects should meet the aesthetic test set forth under Criterion 8 of Act 250;

(c) site selection should also consider access, site clearing, onsite power lines, substations, lighting and off-site power lines. Minimal disturbance of the site shall be a planning objective;

(d) reasonable measures shall be taken to mitigate possible destruction or impairment of habitats existing in a project area; and

(e) facilities deemed to be abandoned or unused should be removed by the owner/operator(s) within a reasonable time from cessation of operations, as well as restoring and/or enhancing the site back to its natural state.

F. Planning Implications

While energy decisions can seem like an uphill battle, every resident can make a difference. Small changes add up and sound regional and local planning can play a positive and effective role in guiding energy decisions. By promoting appropriate land use patterns, participating in energy development decisions, facilitating alternative transportation options, and encouraging energy conservation strategies; municipalities can provide leadership toward a position of sustainable energy use which will not only help to maintain a healthy environment, but will also build a foundation for economic health and stability.

Local planning and zoning bylaws also play an important role in promoting energy efficient development. Planning efforts should be cognizant of settlement patterns less dependent on single occupant vehicle transportation models, land uses and policies that encourage energy conservation and efficient uses of energy resources. In addition, when implementing town plans, municipalities should consider zoning bylaws and subdivision regulations in the development of alternative energy structures/systems where feasible. Furthermore, there needs to be some flexibility in zoning bylaws to allow for an increase in the use of emerging technological advancements in energy resources such as solar and wind.

ENERGY GOALS

1. To improve conservation and efficiency in the use of existing energy resources, and to facilitate the transition to cleaner energy resources in order to protect the environment.

2. To reduce demand for fossil fuels by promoting public transportation, ride-share programs and other programs that lessens the dependence on single occupancy vehicles.

3. To encourage land use patterns and development in the Region that use energy more efficiently.

4. To increase the awareness of residents and municipalities of energy conservation practices and programs through educational programs.

ENERGY POLICIES

1. Member towns and residents are encouraged to pursue the transition from the use of fossil fuels to renewable energy sources.

2. Promote the feasibility of alternative energy options for commercial and industrial uses.

3. No new dams or major improvements to existing dams should be encouraged, or permitted, without full consideration of its social, economic, and environmental impacts, and are in conformance with local and regional plans.
(a) run-of-the-river projects are preferred over projects which require impoundments with low or minimum flows;
(b) recreation and fisheries are high priorities for river uses and should not be significantly diminished by hydropower development; and
(c) water quality and minimum flows to sustain aquatic life must be maintained.

4. Promote alternative transportation practices that promote energy efficiency such as: expanding existing park-n-ride commuter parking lots, bicycle paths to lessen the dependency on single occupancy travel

5. Where it is demonstrated that the costs of providing energy services and facilities clearly is outweighed by a public benefit to the areas or region and the land use settlement patterns resulting from the development or subdivisions are in conformance with this Plan and relevant local plans, such services and facilities should be permitted.

6. Prior to the construction of additional or upgraded transmission or distribution lines or related facilities, utilities should demonstrate that such public investments have maximized demand management, increase energy efficiency and promote energy conservation.

7. Where development and construction of alternative energy facilities and electric power generation facilities are proposed for public use, plans must consider placement of such facilities in locations where aesthetic and wildlife impact is minimal or reasonable measures have been employed to mitigate adverse impacts.

8. Capital investments of public utilities and services are encouraged within built-up centers to support the high intensities of use.

ENERGY RECOMMENDATIONS

1. Encourage the development of a transportation system that reduces the use of single-occupancy vehicles, and enables increased non-motorized vehicle and pedestrian traffic. Emphasize links between schools, stores, work and home, and coordinate these with the development of "greenway" segments.