# Andover Town Plan

# Adopted – 4/08/2013

Selectboard Public Hearing 4/08/13

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# Introduction

# Purpose of the Town Plan

In accordance with 24 V.S.A., Chapter 117 (the Vermont Planning and Development Act), the purpose of the Andover Town Plan is "to guide future growth and development of land, public services and facilities, and to protect the environment" in the best interest of the citizens of Andover. This Plan is intended to include all eleven elements required by § 4382 and be consistent with state planning goals in § 4302.

#### **Town Plan Process**

A Town Plan is developed, and amended as needed, by the Planning Commission, and adopted by a vote of the Board of Selectmen. Town plans expire five years after the date of adoption, at which time they may be amended and re-adopted or entirely rewritten. Adoption procedures are outlined in 24

V.S.A. § 4385. The goals, policies, and recommendations set forth in this plan were prepared by the Andover Planning Commission and adopted by the Andover Board of Selectmen.

# **Background Information**

Andover's original charter was granted by Benning Wentworth in 1761. Andover is a mountainous town, nestled on the eastern slope of the Green Mountains with a land area of approximately 18,560 acres. The town has two villages, Peaseville and Simonsville (named after Edward Simons) and maintains a rural atmosphere (see text box to the right for what defines Andover's rural atmosphere). As such, many of Andover's residents travel outside of town to find work or amenities.

Andover's rural character is defined by the following elements:

- A predominately forested landscape
- Open fields and farming and agricultural operations
- No municipal water and sewer services
- Dirt roads
- Limited, small-scale commercial businesses

Since the Town's earliest days, residents of Andover have been actively engaged in farming and forest-related activities. Although most of these activities do not have the same economic relevance as in the past, some of the residents in the community are still employed in activities such as farming, sugaring and forestry, which utilize the land. Additionally, as Andover is a rural town, many of its residents engage in these activities in their spare time, but do not rely upon them for employment. It is also important to note that Andover has a significant number of seasonal homes.

Land area (square miles):	29.0
Persons per square mile, 2010	16.1
Number of persons, 2010	467
Number of families*, 2010	141
Number of households**, 2010	218

**Table 1 - General Town Figures** 

Sources: U.S. Census of Population and Housing, 2010

Note: See next page for asterisk

- \*A family, as defined by the U.S. Census Bureau, is a group of two people or more (one of whom is the householder) related by birth, marriage, or adoption and residing together; all such people (including related subfamily members) are considered as members of one family.
- \*\*A household consists of all the people who occupy a housing unit. A house, an apartment or other group of rooms, or a single room, is regarded as a housing unit when it is occupied or intended for occupancy as separate living quarters; that is, when the occupants do not live with any other persons in the structure and there is direct access from the outside or through a common hall. A household includes the related family members and all the unrelated people, if any, such as lodgers, foster children, wards, or employees who share the housing unit. A person living alone in a housing unit, or a group of unrelated people sharing a housing unit such as partners or roomers, is also counted as a household. The count of households excludes group quarters.

#### Statement of Andover's General Goals

The following goals are based upon Andover's desire to remain a rural community:

- 1. To preserve the rural character of the community by protecting and sustaining Andover's environment and resources;
- 2. To preserve and protect the cultural and architectural heritage of the Town and maintain Peaseville as the administrative and recreational center of Andover;
- 3. To control future development so that it reflects historic settlement patterns and will not place undue burdens on the Town's ability to provide adequate services to its residents;
- 4. To encourage the most desirable and appropriate use of farmlands and natural resources, the improvement of forest productivity and the preservation of open spaces through sound conservation and management practices;
- 5. To protect public health by controlling environmental pollution (noise, air and water).
- 6. To discourage any change of land that is destructive to the land's natural character, given that the visual landscape is one of our rural characteristics;
- 7. To encourage the conservation of our marketable natural resources and strive to improve local use;
- 8. To balance the rights of individual property owners with the rights of the community at large in regards to decisions made concerning health, safety, and welfare.

# **Population**

Andover had a peak population of 1000 people in 1820 and, according to the U.S. Census, a population of 467 persons in 2010. Andover is a rural town with no urban centers. It is interesting to note that between 1950 (185) and 2000 (496), the Town's population rose steadily; however, between 2000 (496) and 2010 (467) that trend ended and the Town saw a slight decrease in population. See Figure 1 below.

The average rate of growth between 1950 and 2000 was 22.6%. This rate is slightly higher than anticipated given the large growth rates between 1970-1980 and 1990-2000; 46% and 33%, respectively. Another important trend that should be recognized is the steadily increasing number of seasonal homes in Andover. In 1980 there were 99 seasonal housing units. At the last count, in 2010, 174 were reported (2010 U.S. Census).

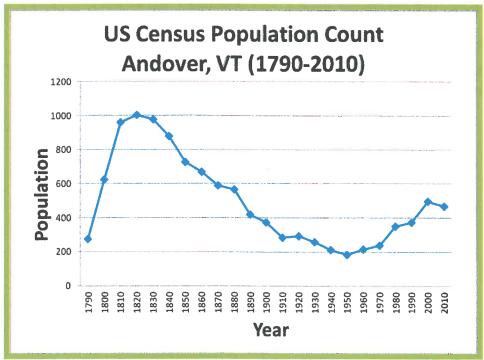


Figure 1 - Town Population 1790-2010

Population Characteristics, 2010				
Percent dependent (persons under 18 or over 64):	39.8			
Percent native (Vermont born):	37.7			
Population Count:	467			

Table 2 - Population Characteristics, 2010

#### **Components of Population Change:** Final population **Initial Population Absolute Change Period Percent Change** 350 1970 to 1980 239 111 46.4% 373 23 1980 to 1990 350 6.6% 1990 to 2000 373 496 123 32.9% 2000 to 2010 496 -29 467 -5.8%

Table 3 - Components of Population Change

(Sources: Computed using U.S. Census of Population and Housing, 1970, 1980, 1990, 2000, and 2010)

#### Goal

1. To control and direct growth so that it occurs in a reasonable and orderly fashion, with minimum impact on the environment, the Town's rural appearance, and its ability to provide services.

#### Recommendation

1. Review the town plan, zoning bylaws, subdivision regulations and other bylaws and ordinances to determine whether changes need to be made to address community-wide issues.

# **Economy**

According to the US Census, 2.7% of the Andover residents worked within the town in 2010. The rest of Andover's wage-earners commuted to the surrounding towns for employment. Because of this long-standing pattern of employment beyond the town's boundaries, Andover recognizes its role as a contributing partner to the regional economy. However, some of the local employers include town government, service contractors, and home occupations.

Andover's residents have, in general, fared well in the region's economic environment. In previous year's Andover's median family income has been slightly higher than the median family income for the county and the state. However, that trend no longer exists. Andover's median family income, as reported by the 2010 Census, is \$43,467, which is lower than both the County's (\$55,597) and the State's (\$56,392).

Income Characteristics, 2009							
Location	Median Household Income	Median Family Income	Per Capita Income				
Vermont	\$49,406	\$56,392	\$27,478				
Windsor County	\$51,229	\$55,597	\$29,053				
Andover	\$51,914	\$43,467	\$24,960				

Table 4 - Income Characteristics, 2009

Notes: MHI = Median Household Income, MFI = Median Family Income, PCI = Per Capita Income, NFMI = Non-family Median Income; % below poverty for family of four, per 1989 federal poverty threshold of \$12,674; N/A = information not available at time chart was created

The types of jobs available to residents in the southern Windsor County region have been steadily changing over the past 30 years. Historically, the types of work within Andover itself have been farming, forestry, and crafts. However, the decline of manufacturing, agriculture, and forestry, coupled with the increase in the ski area industries has changed the regional economy. This change has led to the number of townspeople employed in those sectors to decline steadily since 1980. It has also lead to the increase in job opportunities in the communications, public utilities, information, education, health and social services sectors. Please see the table below for actual numbers.

Total Employment, 1980-2010					
Total employment, 1980 (Persons 16 years and over):	186				
Total employment, 1990 (Persons 16 years and over):	192				
Total employment, 2000 (Persons 16 years and over):	267				
Total employment, 2010 (Persons 16 years and over):	182				

Table 5 - Total Employment, 1980-2010

Number of Workers by Industry, 1980-2010						
(Employed persons, aged 16 and over)	1980	1990	2000	2010		
Agriculture, Forestry, Fisheries, Hunting and Mining	17	8	32	0		
Construction	24	41	26	10		
Manufacturing	46	19	32	14		
Transportation	2	7	0	5		
Communications, Public Utilities, and Information	0	0	5	11		
Wholesale Trade	6	0	0	8		
Retail Trade	26	32	37	29		
Finance, Insurance, and Real Estate	12	14	8	6		
Professional, Scientific, Management, Administrative, and Waste Management Services	15	18	18	12		
Entertainment, Recreation Services, Accommodations, and Food Services		2	33	31		
Education, Health and Social Services	23	35	50	47		
Other Professional Services	7	12	18	3		
Public Administration	8	4	8	6		

Table 6 - Number of Workers by Industry, 1980-2010

Source: U.S. Census of Population and Housing, 1980, 1990; US Decennial Census 2000, and 2010 Longitudinal Employer-Household Dynamics (excludes self-employed)

Many Andover townspeople commute to the nearby towns of Chester, Ludlow, and Springfield. Over 50 people also commute to towns outside the region that are farther away such as Lebanon, Rockingham, Claremont, etc... According to the 2006-2010 American Community Survey the mean travel time was 22.4 minutes. The environmental, financial, and personal costs of commuting to work are an ongoing concern, in part, due to the trend of rising fuel costs. Therefore, ride sharing may be of interest to those who commute.

#### **Child Care Facilities**

Child care is an important consideration for families who have two wage earners, or for single parent households. Although Andover does not have any licensed child care providers or registered child care homes in the town, there are 11 licensed providers and 10 registered homes in the surrounding towns of Chester, Weston, Londonderry, Ludlow, Grafton, Mount Holly and Cavendish. Another resource available to Andover families is the Early Education Collaborative. The Collaborative is a program administered by the Windsor Southwest Supervisory Union dedicated to ensuring universal access to

preschool for children between the ages of three and four. It provides 10 hours per week for 35 weeks a year. During the 2010-2011 school year four children from Andover were enrolled in the program and during the 2011-2012 school year, five children from Andover were enrolled.

#### Goal

1. To encourage a strong and diverse regional economy that provides job opportunities for Andover residents while maintaining the Town's unique quality of life.

#### **Policies**

- 2. Support the creation and retention of home-based and other small scale businesses that would be able to utilize, in an appropriate manner, the town's human and natural resources.
- 3. Support the development and operation of child care facilities within the town.

#### Recommendations

- 1. Support the continued cooperation between the Town, Planning Commission and local and regional economic development groups.
- 2. Zoning Bylaws and other town ordinances should facilitate the creation and retention of home based and other appropriate businesses in Town.

# Housing

According to the US Census, there were 408 housing units in 2010. Of these, 218 units were occupied and 190 were vacant at the time of the census. Of those vacant, 174 were seasonal homes in 2010, accounting for 42.6% of the total housing units. Seasonal homes pay taxes to help support town services which the seasonal homeowners infrequently use. However, people purchasing seasonal homes typically have more disposable income and can afford higher prices when purchasing a home. This, in turn, drives up the cost of housing in Andover.

Vermont Statute states that affordable housing is housing owned by its inhabitants whose gross household income does not exceed 80 percent of the county median income and that the total cost of the housing is not more than 30 percent of the households' gross annual income (10 V.S.A. § 6001(29)). Andover's 2010 median household income was \$51,914, slightly higher than that of Windsor County (\$51,229) (please see Table 4 above). From these figures, no more than \$1,024.58 per month should go toward mortgage payments (or rent), heat, electricity, water, housing related taxes (or fees), and other similar housing expenses for housing to be "affordable." In 2011, the average home costs in Andover were among the highest in the region, and have more than doubled in price since 1996. Homes in Andover on less than 6 acres of land cost an average of \$258,333 in 2011, compared to \$108,478 in 1996 (please see Table 7 below). A 30-year mortgage at 5.0% mortgage interest rate for a home costing \$258,333 would result in \$1,386 of monthly mortgage costs. This rate is already 41% of the monthly median household income for the county, not accounting for utilities, heat, electricity, water, house related taxes and similar fees. It is likely, therefore, that the majority of people living in Andover could not afford to purchase a home there today.

One form of affordable housing is Mobile Homes. According to the VT Department of Taxes, there were 14 mobile homes in Andover during 2011. Another potential form of affordable housing in Andover is accessory dwelling units. Andover's zoning regulations include the equal treatment of housing provision which allows for accessory dwelling units. Andover recognizes that, as a rural town without municipal sewer and water, the cost of land is a large hurdle to affordable housing. Andover, as a community, supports the provision of affordable housing and is supporting it by allowing for mobile homes and accessory dwelling units.

2011 Residential Counts and Average Fair Market Values (FMV)*								
TOWN	R1** count	R1 avg. FMV	R2** count	R2 avg. FMV	MHU** count	MHU avg. FMV	MHL** count	MHL avg. FMV
Andover	156	\$258,333	207	\$422,625	8	\$3,505	6	\$97,267
SWC Region	6,755	\$173,964	2,441	\$337,324	452	\$20,541	518	\$97,983

Table 7- Residential Counts & Average Fair Market Value

<sup>\*</sup> Fair Market Value (FMV) is determined by dividing the total Equalized Value for each category and dividing by the count. Data from VT Department of Taxes "Municipal Listed Values and Equalized Values by Category" 2011 Tax Year. Prepared 1/13/2012 http://www.state.vt.us/tax/pdf.word.excel/pvr/reports/2012/LVtoEQbyCAT Mun.xls

<sup>\*\*</sup> Property definitions are as follows:

R1 - Residential on less than 6 acres

R2 - Residential on greater than 6 acres, not including working farms

MHU - Mobile home - unlanded (set up on land not owned by the owner of the mobile home, as in mobile home parks)

MHL - Mobile home - landed (set up on land owned by the owner of the mobile home)

#### Goals

- 1. To encourage a diversified housing stock so that residents and their children can afford to reside in Andover.
- 2. To support the efforts of the Windham and Windsor Housing Trust to provide safe and affordable housing.

#### **Policies**

- 1. Encourage new home construction to occur in a manner that preserves the rural character of the town.
- 2. Encourage new home construction that most local residents can afford.

#### Recommendations

- 1. Review zoning and subdivision regulations for consistency with affordable housing goals.
- 2. Consider strategies for affordable housing in zoning and subdivision regulation, such as maintaining historic density levels in historic villages, and provision of accessory living spaces within existing buildings.
- 3. Work with the Windham and Windsor Housing Trust and the regional commission to meet local housing needs.

# Education

Andover provides for the education of its children through membership in the Green Mountain Union High School and the Chester-Andover Elementary Union School districts. The Town has representatives on both schools' Boards of Directors. Enrollment is expected to remain at approximately the same level, barring any dramatic changes in the Town's population. Since the operating costs of Chester-Andover Elementary and Green Mountain Union High School are based on enrollment (please see Table 8 below for enrollment numbers for the past 10 years), Andover's cost has fluctuated from year to year. In addition to those who attend public schools, some of Andover's children are home-schooled and some attend private schools without direct taxpayer assistance.

Number of Andover Students Attending School						
	CAES	GMUHS	TOTAL			
2011	28	36	64			
2010	25	30	55			
2009	21	30	51			
2008	25	25	50			
2007	31	19	50			
2006	27	26	53			
2005	29	32	61			
2004	25	26	51			
2003	30	26	56			
2002	33	35	68			
2001	25	31	56			

Table 8 - Number of Andover Students Attending School

#### Elementary School

The Chester-Andover Elementary Union School District #29 educates children living in Chester and Andover from Kindergarten through Grade 6 and also includes an Early Childhood program for preschool children. The school is located on Main Street in the center of Chester. It has 17 classrooms and about 340 students, which translates to about 20 students per classroom. Twenty students per classroom is the upper limit of classroom density in the current philosophy of the current school board, hence the school is operating at full capacity at this time.

#### High School

The Green Mountain Union High School District #35 educates children living in Andover, Cavendish, and Chester from Grades 7 through 12. The high school is located on Route 103 just south of Chester's village. It was built in 1971 to serve 800 students, but the actual capacity, suggested by the number of student lockers, is 705 students. The current enrollment (2012), at 333 students, is well below the capacity of this facility. Additionally, high school students have the choice of attending the Howard Dean Technical Center in Springfield for vocational classes.

# Post High School

Vermont Community College in Springfield offers college level courses. New Hampshire Community Technical College in Claremont, NH, offers college level courses, associate degrees, and adult continuing education. There is also workforce training offered through the Workforce Investment

Board in Springfield, which is located in the same building as the Vermont Community College.

Levels of Educational Attainment for Andover Students, 1980-2010							
Educational Level	1980	1990	2000	2010			
Percent of population 18 and older with less than a high school education	20.8%	14.1%	8.5%	5.6%			
Percent with high school diploma or equivalent	37.5%	34.1%	37.2%	33.1%			
Percent with Associate's degree or some college	21.7%	26.8%	21.5%	27.3%			
Percent with Bachelor's degree or higher	20.0%	25.0%	32.7%	34.0%			

Table 9 - Levels of Educational Attainment for Andover Students, 1980-2010

#### Goal

1. To ensure that the residents of Andover have access to adequate educational opportunities.

# **Policy**

1. Maintain and improve the quality of the education systems used by the town.

#### Recommendation

1. Maintain active and effective representation on the elementary and high school boards.

# **Transportation**

There are a total of 44.46 miles of publicly maintained roads and highways in the Town of Andover, including two State Highways: Route 11 and Route 100. Andover has no publicly maintained sidewalks or pedestrian trails. Bike and pedestrian consideration is therefore limited to sharing the road. The current transportation infrastructure is sufficient and no future expansion projects are planned. As such, regular road maintenance will be adequate for the duration of this plan.

In accordance with State law, local roads are classified into four groups based on their level of use, condition, and surface type. These groups are identified as Class 1, 2, 3, 4 and Legal Trails. The classifications are used to determine the amount of State Aid given to towns for transportation.

Andover Town Road Inventory					
Class 2 Town Highway	9.93 miles				
Class 3 Town Highway	30.64 miles				
Class 4 Town Highway	4.62 miles*				
State Highways	3.89 miles				
Private Roads	Approximately 04.00 miles				
Legal Trails	18.86 miles				

Table 10 - Andover Town Road Inventory

Class 2 roads are the most frequently used roads in town and most of these are paved. Class 3 roads generally connect to either Class 2 roads or State highways and may be either paved or unpaved. Class 4 roads are unpaved, seasonal roads that are not plowed in winter. Towns do not receive State Aid for Class 4 roads and are not required to maintain them.

Andover has a rich history of old roads, cellar holes, family settlements, and events that are still part of the town's heritage, including 18.8 miles of Legal Trails that crisscross the town. These Trails were once class 4 roads that have since been converted. They are described and controlled by a town ordinance and depicted on the State of Vermont Highway Map.

Maintaining the existing road system is important to Andover's economic well-being and future growth. Expansion of the existing road network could have negative impacts on the town for a variety of reasons. One of which is the cost of maintaining public roads. Currently, it accounts for about 51% of the total municipal budget, not including education (2011 Town Report). However, if the road system was expanded upon, that cost could rise. Additionally, extending the existing roads or creating new roads could seriously affect the physical character of the community and lead to dispersal of housing and population.

While there are not any regional transit routes that run through Andover, dial-a-ride services are available through Connecticut River Transit. Connecticut River Transit also provides Elderly and Disabled and Medicaid transportation services to eligible residents.

Particularly on state highways, the thoughtful location and design of highway accesses, or curb cuts, directly affects the safety and efficiency of travel. The Vermont Agency of Transportation issues access permits for Routes 11 and 100, subject to B-71 standards and VT Access Management Program Guidelines. Town access permits are required for curb-cuts along all town roads under Andover's road

<sup>\*</sup>Not included in the Town's total mileage

ordinance.

#### Goals

- 1. To maintain a transportation system that is cost effective, environmentally sound, safe, convenient, and efficient for the movement of people, goods, and services.
- 2. To encourage the use of the Legal Trail network for historical and recreational purposes.

#### **Policies**

- 1. Careful consideration, including a review of the town's road ordinance, shall be given to all potential impacts before expansion of existing roads or construction of new roads is approved or accepted.
- 2. Maintain a transportation system that is consistent with the rural character of the Town.
- 3. Sound access management principles shall be used in granting vehicular access along public highways, taking into consideration safety, efficiency, and land use goals.
- 4. Encourage residential development in close proximity to existing town highways.
- 5. Promote and participate in local and regional transportation planning.
- 6. All new road expansion projects planned as part of a subdivision shall comply with Andover's zoning and subdivision regulations.
- 7. Maintain the Legal Trails network for non-motorized use and manage it in a manner that does not result in environmental damage to the land.

#### Recommendations

1. Review the Town road ordinance for consistency with newest Vermont codes and standards and subdivision road standards.

#### **Town and Public Facilities**

For the duration of this plan, no large public investment is anticipated. The existing Town Office, Town Hall, Highway Garage, and municipal equipment appear to be adequate for the next five years. In 1993 the Town Hall was relocated and improvements were made including adding a kitchen, bathrooms, and handicap access to the building. In 2011 and 2012, insulation improvements were made to the Town Offices.

The Town of Andover does not intend to construct or operate a municipal water system or a municipal sewage disposal system within the time frame of this plan. Owners of residential and commercial facilities are expected to provide for their own water needs and for on-site sewage disposal needs in accordance with the provisions of the State's regulations for water and wastewater.

There are no plans for any additions and/or new construction related to public recreational facilities. Additionally, the Town does not operate a transfer station. Andover residents can utilize the Springfield transfer station for disposal of their trash and recyclables.

Police protection is provided by the Vermont State Police. Andover contracts and pays for firefighting services and emergency ambulance services provided by the Town of Chester Fire Department. The present levels of Police, Fire and Emergency services are considered adequate for the duration of this plan. The Springfield Hospital is the closest full service hospital; however, there is also a community health center located in Chester that residents could also take advantage of.

#### Goal

1. To maintain the appearance, safety and quality of town and public facilities.

#### **Policies**

- 1. Encourage the use of existing Town facilities, as appropriate.
- 2. Promote the use of Town facilities in the recognition and celebration of commemorative events and occasions of importance to the citizens of Andover.

#### Recommendations

- 1. The Board of Selectmen will review the condition of town facilities and equipment on an annual basis.
- 2. Develop a Capital Program and Budget Plan to guide town expenditures on future capital projects.

# **Energy**

While state and federal policies have greater influence on energy use and consumption than the policies of a small rural town, regional and local efforts can affect energy consumption through car pooling, conservation, and the use of renewable energy resources. Reducing local dependence on foreign energy sources and reducing overall energy demand are in the best interests of the residents of Andover. In addition, municipal energy efficiency improvements can reduce operational costs and save tax-payer money.

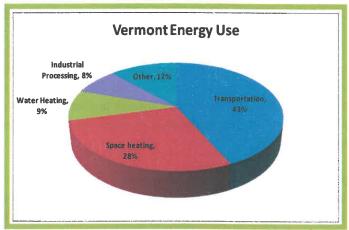


Figure 2 - Vermont's Energy Use

As demonstrated by the figure above, transportation accounts for the largest portion of energy use in the state of Vermont at 43%. Space heating comes in second, with 28% and the remaining 29% is split between water heating, industrial processing, and other uses.

#### **Heating Fuel**

Wood, propane and heating oil are among the more common types of fuel used to heat homes in Andover. According to the 2005-2009 American Community Survey, 68.9% of Andover's residents heat their home with some form of a petroleum product. The remaining 31.1% utilize wood as a fuel source. The percentage of Andover residents that utilize a petroleum product to heat their homes is lower than the percentage for the State, which is at 82.7%. However, the percentage of Andover residents that utilize wood as a fuel source is significantly higher than the State percentage, which is 11.8%. This trend could be attributed, at least in part, to the rising cost of home heating fuels, which leads people to seek out cheaper sources of fuel such as cord wood. Home heating costs can be significantly lowered by using modern insulating and building techniques, achieving higher "R" ratings. The State of Vermont has recently updated its Residential Building Energy Standards to incorporate more energy efficient techniques; the new standards apply to all new residential construction after July 1, 2011.

#### Alternative Energy Resources

Wind and solar power are potential alternative sources of energy. Building location and design are very important for taking advantage of these resources. Installation of insulation, weather tight windows and doors, and highly efficient appliances can dramatically reduce the amount of conventional fuel needed and/or ensure efficiency of alternative sources of energy. Passive solar energy and solar cells that generate electricity are generally most effective for southern and western

exposures. Passive solar energy makes use of the sun's light and heat through windows and skylights, while solar cells store energy in batteries and convert it to electricity for later use. Solar thermal applications use the energy provided by the sun to heat water and are the most efficient systems for harnessing the sun's energy.

#### Residential Scale

Solar thermal and photovoltaic applications are also excellent sources of renewable energy. They can provide electricity, heat, and/or hot water to a household. These systems require solar access, which is not an issue given Andover's rural character. Residential scale solar systems should be encouraged throughout town.

Wind is an alternative source of electrical energy for homes, under the right conditions. Wind generators must be mounted on towers above tree line and need an average wind speed of nine (9) miles per hour (mph). Better conditions can utilize shorter towers and smaller turbines, creating less of an impact on scenic views. Small towers serving individual or even multiple residences are feasible throughout town and should be encouraged.

According to the Vermont Renewable Energy Atlas (accessed on 8/6/12), there are two residential photovoltaic systems, one residential solar thermal system, and one residential scale wind turbine currently grid tied in town. Other renewable resources exist in town that are not grid tied. As these systems did not go through the same permitting process, they are not shown on the Vermont Renewable Energy Atlas.

#### **Utility Scale**

Utility scale wind power generation facilities use much larger towers than their residential scale counterparts. These facilities are typically sited on ridgelines or higher elevations where wind is more constant and average speeds are higher. According to a wind energy map produced for the Vermont Department of Public Service, the ridgeline on the western side of town could support a utility scale wind power generation facility.

The Town of Andover opposes the development of all utility scale wind facilities in town. In particular, the location of a utility scale wind or power generation facility is prohibited from the following locations: the ridge lines of Terrible Mountain, East Hill, and Markham Mountain. Not only would a facility in those locations disrupt Andover's pristine views, it could potentially have severe consequences in the form of habitat fragmentation, loss of wildlife habitat, increased erosion, noise pollution, and negative impact to water quality.

#### Energy Conservation and Efficiency

The Town of Andover should take the initiative to promote energy efficiency. Measures to achieve reduction in energy demand in residential areas include the use of cost-efficient alternative energy resources, including renewable resources, for both new homes and additions/renovation of existing homes; the construction of energy-efficient new homes; increasing awareness among town residents of the link between the cost savings potential and the practice of energy conservation and the use of alternative energy resources. Architects and builders should be encouraged to examine alternative energy resources in the design and construction phases of residential development. Efficiency Vermont, a statewide provider of energy efficiency services, and the Southeastern Vermont

Community Action Home Weatherization Program are available to assist builders and homeowners with making homes energy efficient. Where feasible, residential units should be located to maximize the benefits from alternative energy resources and take advantage of existing infrastructure.

One step Andover has taken towards energy efficiency was to examine the annual municipal energy consumption. During the calendar year of 2009, the Town of Andover spent \$33,704.00 on energy and emitted 302,198 lbs of CO<sub>2</sub>. Of the \$33,704 expended on energy during 2009, \$2,930.92 (9%) was spent on electricity, \$21,797.82 (65%) was spent on diesel fuel for vehicles, and \$8,975.34 (26%) was spent on heating oil. With assistance from the Regional Planning Commission, the Town implemented several energy saving measures at the Town Hall, including installation of insulation and air sealing around windows and doors. Hopefully, the Town can set a positive example for residents to follow and demonstrate that efficiency measures are worthwhile.

# Transportation and Energy Use

Along with residential consumption, energy use for transportation is anticipated to account for the greatest demand over the next 20 years. Efforts to reduce transportation demand should focus on reducing single passenger transportation, reducing the costs for the construction and maintenance of the town road network, maintaining public vehicles and roads, and public education. In an effort to minimize energy costs, the expansion of roads should be limited and public vehicles should be regularly maintained and replaced. In addition, the Town should promote the use of energy efficient vehicles and encourage residents to use car and van pool programs.

Energy consumption can also be reduced by promoting pedestrian and non-motorized traffic through the development of pedestrian walkways, the location of goods and services in close proximity to higher density residential areas, and the development of bikeways and greenways.

# **Energy and Land Use Patterns**

When land use patterns do not relate to existing infrastructure and development, energy can be lost through excessive travel distances and unnecessary expansion or extension of facilities and systems. Wherever possible, development should be concentrated in order to reduce the costliness of dispersing energy over large geographic areas. The location of community service structures, retail sites, public utilities, day-care centers, state and municipal offices, and other frequently visited sites should be encouraged to be within walking distance of residential areas. In addition, new roads and other utilities should be located, when feasible, to coincide with existing and recommended land use patterns as set forth in this document.

#### Goal

- 1. To reduce dependence on foreign energy sources.
- 2. To encourage energy saving measures that can be adopted by local residents.
- 3. Encourage land use patterns and development that use energy more efficiently.
- 4. Promote development of local, residential scale renewable energy resources.
- 5. Ensure efficient use of municipally owned equipment and vehicles.

#### **Policy**

- 1. Ensure that all new construction utilizes building techniques that make efficient use of energy.
- 2. Encourage residential scale wind and solar power generation systems.
- 3. Ensure municipal vehicle fleet is properly maintained to maximize fuel efficiency.
- 4. Minimize fragmentation of large tracts of forested land (typically 50 acres and above) in order to

- maintain local sources of fire wood and timber, conserve wildlife habitat, and preserve Andover's rural character.
- 5. In order to protect Andover's scenic ridgelines the development of utility scale wind and solar facilities are prohibited.

#### Recommendation

- 1. Cooperate regionally to hold educational events encouraging citizens to adopt energy saving measures, thereby lowering living expenses.
- 2. Provide information on Vermont Residential Building Energy Standards at Town Offices

#### Utilities

The promulgation of the Telecommunications Act of 1996 has led to the proliferation of telecommunication towers and facilities. The siting of electrical facilities, transmissions lines, telecommunication and broadcasting towers and facilities involves health, safety, and aesthetic issues. These structures can alter mountaintops and ridge lines in ways that negatively affect scenic resources vital to Andover's economic and cultural future. View-sheds and bear habitat are particularly vulnerable to impacts from the development of new communications towers. Communications towers and electrical transmission lines must meet the Federal Communications Commission's standards for Electromagnetic Fields (EMFs). In particular, new telecommunication towers or transmission lines are discouraged from the ridge lines of Terrible Mountain, East Hill, and Markham Mountain. Additionally, all new telecommunication towers and transmission lines must meet zoning standards and mitigate negative effects to the environment.

The town also recognizes the national need to conserve natural resources and reduce pollution through local efforts to reduce consumption, and to reuse and recycle existing products and materials that would otherwise become waste.

#### Goals

- 1. To accommodate the necessity of utilities while minimizing the economic, aesthetic and environmental impact upon the town.
- 2. To encourage citizens to reduce, reuse, and recycle.

#### **Policies**

- 1. Allow new facilities and towers only as necessary to meet the changing needs of the public.
- 2. Encourage the use of existing towers or structures that would support equipment before construction and siting of new towers is permitted.
- 3. Discourage the siting of new telecommunications towers on ridge lines and mountaintops within the Town.
- 4. Encourage citizens to use recycling programs in neighboring towns.

#### Recommendations

1. Consult the Andover Zoning Regulations for the specific conditions of construction and siting of any electrical, telecommunication or broadcasting tower or facility.

# **Natural and Cultural Resources**

#### Air Quality

Andover does not have a heavy industrial base or concentrated population that has led to an air quality problem. Accordingly, the Town's good air quality constitutes an environmental resource that has aesthetic as well as human health benefits. Elements that could negatively affect air quality include: smell, particulate matter (from dust, smoke or fumes), radiation, chemical vapors, motor vehicle exhaust and power plant emissions.

Andover's ambient air quality should be maintained. Town equipment should meet emission standards. The town should take an active role in the review of development proposals or plans that could adversely affect air quality.

#### Goals:

1. To preserve the current high air quality.

#### Policies:

1. All town equipment should meet State emission standards.

#### Recommendations:

- 1. Consider adopting performance standards for emissions into zoning bylaws.
- 2. Encourage local residents to keep their vehicles and equipment in compliance with all applicable emission standards.

# Agricultural and forested lands

A small and continually decreasing percentage of land in Andover is utilized for agricultural purposes. This trend is a concern for the Town as farms provide open space and contribute to the rural character that people enjoy about Andover. A few of the other benefits provided by farmland include habitat for a variety of mammals, reptiles, amphibians, and birds as well as a patchwork of fields, forests, and view-sheds which together constitute an aesthetic resource.

Certain areas of town are identified as having prime agricultural soils. Primary agricultural soils are defined as those areas of land which are capable of supporting an agricultural operation and are further defined in 10 V.S.A. § 6001 (15) [Act 250]. These lands and other areas that are currently being used as farmland and/or forested land under production such as maple syrup operations should be preserved for agricultural uses when possible and, where that is not possible, the use should not diminish the lands future productivity.

The majority of land in Andover is forested. The quality and quantity of these lands contributes significantly to the rural character that is so important to town residents. Andover's forests are currently a mix of broadleaves and conifers. One species in particular, the Sugar Maple, plays an integral role in Vermont and Andover's cultural heritage as it provides colorful foliage and the sap necessary to produce maple syrup. Andover's forests also play an important role in the health of the environment. Carbon sequestration, erosion control, wildlife habitat provision, and flood intensity mitigation are just a few of the many benefits provided by forestlands. Therefore, it is in the best interest of the Town to preserve the quality and quantity of their forestlands.

#### Goals

- 1. To promote the continued use of agricultural and forested lands in a manner that helps to preserve the natural beauty, ecological health, function, and productivity of the lands.
- 2. To encourage sustainable uses of Andover's marketable natural resources.

#### **Policies**

- 1. Areas of land identified as having primary agricultural soils shall be devoted to the production of agricultural products, or to uses that will preserve such lands for future agricultural operations.
- 2. Any development planned for agricultural or forested lands shall not reduce the natural productivity of these lands and shall minimize environmental impacts.
- 3. All logging and forest-related activity should be done in accordance with Best Management Practices (BMP) and Acceptable Management Practices (AMP) as established by the Vermont Agency of Natural Resources (ANR).

#### Recommendations

- 1. Promote, through education, the correct management practices for agriculture and forest-related activities by utilizing the expertise of professionals.
- 2. Work with area land trusts, in cooperation with land owners and the community, to educate people on the different methods available to preserve important forested and agricultural lands.
- 3. Continue to identify areas of significant aesthetic value to the entire community.

#### Surface waters and wetlands

The rivers and streams that run through Andover are a valuable resource for the town and for the Williams River watershed. While most of the streams are small, many contain healthy populations of native fish and serve as the headwaters of the upper and middle branches of the Williams River. Headwater streams are sensitive to change, and land uses in this part of the watershed can affect water quality and river stability further downstream.

Due to the importance of these surface waters, it is imperative that they be protected. Protection of surface waters involves stream bank management, overseeing point source discharges of wastes, and controlling non-point sources of water pollution and storm water runoff from roads and impervious surfaces. Naturally vegetated buffer zones next to surface waters can help to filter pollutants, provide shade for fish, and habitat for birds and mammals. In addition, wide buffers provide natural greenways and wildlife corridors.

A number of ponds and wetlands are also located throughout Andover, many of which are included in the National Wetlands Inventory. Wetlands, small ponds and vernal pools (ponds that dry up in summer months) are biologically productive ecosystems and serve a variety of functions: retaining stormwater runoff, reducing flood peaks, protecting groundwater quality, filtering eroded sediment, and providing habitat for a wide diversity of plants and animals. They also provide open space and

contribute to Andover's scenic landscape. According to the Vermont Wetlands Rules, Class 1 and 2 wetlands (those identified in the National Wetlands Inventory) require conditional use review prior to the issuance of a local zoning permit.

#### Goals

1. Maintain or enhance the integrity and functions of Andover's surface waters and wetlands.

#### **Policies**

- 1. Continuous areas of undisturbed vegetation along rivers and streams should be encouraged, thereby protecting shorelines, wildlife habitat, and scenic quality.
- 2. New development adjacent to streams or rivers must be designed to cause minimal damage to the stream environment. Any such development should be planned so that surface waters do not become silted, contaminated, or otherwise degraded.
- 3. A naturally vegetated buffer strip between development and surface waters should be maintained.
- 4. Any storing or transporting of chemicals or other hazardous material shall be done in such a manner so as to have no adverse effects on streams or other sources of water.
- 5. The use of road salts and other chemicals adjacent to sensitive areas such as wetlands, stream crossings, and steep slopes should be minimized.
- 6. Any alterations to ponds and wetlands must be in compliance with all local, state, and federal regulations.

#### Recommendations

- 1. Review and amend zoning regulations to protect rivers and streams, ponds and wetlands not already protected under state law.
- 2. Include high elevation streams and buffer areas in a plan for open space conservation.

# Wildlife habitat and endangered species

Wildlife is plentiful throughout the town of Andover. Whitetail deer, black bear, moose, and wild turkey are a few of the animals that can be found around town. Large tracts of undeveloped land provide the best habitat for bear, deer, and wildlife in general. However, some habitat areas are more important, or "significant," than others. Habitat is considered more significant when it supports rare species or an unusually large number of species; provides an abundance of food, maternity sites, or other resources; provides a buffer for wildlife against the effects of development; or when it represents a small percentage of the landscape. The Vermont Department of Fish and Wildlife may consider protection of significant habitats as Necessary Wildlife Habitat under criterion 8(a) of Act 250. Additionally, the Department of Fish and Wildlife rates land according to its wildlife habitat suitability. Areas that receive higher ratings (as shown on the Wildlife Habitat Map) should be preserved. According to the Vermont Non-game and Natural Heritage Program, there are currently no endangered or rare species located in Andover.

#### Goal

1. To preserve wildlife habitat areas.

#### **Policies**

1. Encourage the conservation of contiguous properties and discourage practices that fragment wildlife habitat.

#### Recommendations

- 1. Develop strategies to protect areas containing rare species, exemplary natural communities, and necessary wildlife habitat. Strategies may include public and quasi-public ownership or conservation easements protecting such lands.
- 2. Request that the Regional Planning Commission update maps, as appropriate, indicating the locations of state regulated natural resource constraints.
- 3. Review Andover's subdivision regulations to ensure conformity with wildlife habitat policies.
- 4. Discuss at town meeting and other community forums the development of a conservation program.
- 5. Discuss the merit of creating a conservation commission.

#### Mineral resources

Gravel and sand are the only earth resources utilized at this time, but other resources such as granite, soapstone and talc may be present. Mining provides jobs and is a valuable source of income for rural communities. Resources from mining make activities such as building construction, road development, and a variety of other manufacturing processes possible. However, mining and mineral extraction can adversely affect a community in a number of ways. First, the road network can suffer damage due to the heavy equipment and trucks that need to be transported to and from the job site. Second, the aesthetics of the community's rural landscape can be negatively impacted. Third, surrounding ecosystems can be negatively affected (these effects include, but are not limited to degradation of water quality, habitat fragmentation, and degradation of soil quality). Finally, the peace and quiet of a rural community can be changed due to the associated noise pollution.

#### Goals

- 1. To encourage the extraction and processing of mineral resources in a manner that is appropriate and consistent with Andover's rural character.
- 2. To minimize negative effects from mineral extraction to the surrounding ecosystems.

#### **Policies**

- 1. The extraction of any earth resource shall be permitted only when the present and future effects of such extractions and related processing are not unreasonably damaging to the surrounding properties and the environment.
- 2. Require that earth resource extraction sites be restored as closely as possible to their original condition in a timely manner.

#### Recommendations

1. Review local and state regulations to assure that the public interest is protected. Amend local regulations to conform to any revised state regulations.

#### **Cultural Resources**

There are many historically significant structures located throughout Andover, thirteen of which have been identified on the State Register of Historic Places; one of these, Rowell's Inn in Simonsville, has been entered on the National Historic Register. The other state identified sites are: the Union Church, the Andover Community Church, the Jacquith House, Marie Hill Farm, the Elliot House, the Hazeltine House, the Town Hall, the Bergquist House, the Hale House, the Halloway House, the Davison House, and the Town Highway 17 Bridge, over Nancy Brook. These structures, and others like them, should be protected and preserved.

#### Goals

- 1. Protect and preserve the structures recorded in the state and national registers of historic places.
- 2. Protect and preserve cultural resources as they are identified by the residents of Andover.

#### **Policies**

- 1. The demolition of historically significant structures should be discouraged.
- 2. Property owners of historic structures seeking inclusion in the State or National Registers should be encouraged and assisted in their efforts.

#### Recommendations

- 1. Review bylaws to strengthen protection of historic structures.
- 2. Cooperate with local Historical Societies and the Vermont Division for Historic Preservation to build public consensus for the value of historic structures.
- 3. Inventory cultural resources as identified by the residents of Andover.

#### **Land Use**

#### **Existing Land Use**

Andover is a small, rural town that is predominantly forested. The town consists of single family residential homes and seasonal homes (due in part to Andover's proximity to the Okemo ski area) with very little commercial development. There are a few businesses that operate in town, but most people work in surrounding towns. Development in the Town of Andover has been significantly influenced by its topography and road access. Generally, commercial development has occurred along Andover Road and Route 11 with the exception being the Tater Hill recreational area which is located in the Towns of Windham and Andover. Residential development has been limited by steep slopes, very shallow soils and poor road access. Current land use patterns continue to be influenced by many of the same limitations, but other important factors such as technological advances and availability of capital are providing opportunities for development in areas that were once considered severely limited.

#### **Future Land Use**

Historically, development in Andover has occurred in a manner that was in accordance with community interests. The rate at which the population has grown has not placed an undue burden on town services and schools, nor on the environment, primarily because the majority of development has been for single family homes or for small subdivisions. Should a proposed development place an undue burden on Town services and schools, the Town may require the project to be phased in to mitigate the effects.

In order to guide future growth with respect to the requirements of 24 V.S.A. 4382(a)(2), the following land use categories are established and shown on the Future Land Use Map. Generally, land within the delineated areas is suitable for the uses and densities proposed in this Plan; however, the physical characteristics of certain individual properties may be such that engineering or environmental considerations will further limit development. The descriptions of appropriate land uses and densities should be interpreted generally; individual properties may have additional limitations. There are currently no industrial land uses in the Town of Andover and the Town does not anticipate any in the future. However, working landscape uses such as sustainable logging or maple sugaring may be found in all of the categories; therefore, it is important that these uses minimize impacts to adjacent parcels.

Along with the development capability of the land and protection of valuable natural resources, the efficient provision of public services is the basis for Andover's land use categories. Directing growth to areas most effectively and efficiently serviced by utilities, roads, and services will help the Town achieve its stated objectives of maintaining its rural character and controlling the cost of public services. Development on the remaining, more remote land should be limited to the lowest density uses because of the steeper terrain, higher elevations, more fragile environments, wildlife habitat, and limited access to roads and other services.

# Agriculture

- A. Values: farming economy, food supply, cultural heritage, rural character
- B. Desired uses:
  - 1. Encourage the continued operation of active farms
  - 2. Conserve both prime agricultural soils and agricultural soils of statewide importance for future

use

3. Allow for low-density residential & home industry uses, but minimize fragmentation of agricultural soils

#### **Conservation**

- A. Values: wildlife habitat, outdoor recreation, educational resources, fragile natural areas, economic asset (recreation & tourism), forestlands, shorelands/flood control management areas, aesthetic
- B. Desired uses:
  - 1. Maintain natural conditions for current and future generations, highest level of protection from development
  - 2. Very low density
  - 3. Special care with resource management or extraction to maintain character and value of these resources

#### **Rural Residential**

- A. Values: rural character, recreation, working landscape and forestlands
- B. Desired uses:
  - 1. Maintain rural character
  - 2. Highest density settlement patterns
  - 3. Supports a variety of uses (residential, agricultural, forest, home occupations and other compatible uses)
  - 4. Discourage sprawl and strip commercial development

#### **Commercial**

- A. Values: commercial uses at a scale appropriate for Andover, job opportunities
- B. Desired uses:
  - 1. Commercial uses at smaller scale that are appropriate for Andover (with no public water & sewer services), such as a gas station, inn, or sawmill.
  - 2. Concentrate commercial uses to minimize traffic and other impacts on other parts of town
  - 3. Minimize undue adverse impacts on adjacent, non-commercial uses through siting, landscaping, screening and other efforts

#### Goal:

1. Development shall be compatible with the surrounding areas to the greatest extent possible inorder to preserve Andover's rural character, open spaces, and historic land use patterns.

#### **Policies**

- 1. Future development shall be consistent with the future land use map and category descriptions.
- 2. It shall be the policy of the Town of Andover to control the rate of growth within the community so as to promote orderly development without placing undue burdens upon the taxpayers or the environment.

- 3. Commercial and industrial development should be at the appropriate scale for a small rural community like Andover.
- 4. Residential development should not fragment important agricultural and forest lands or lands that provide habitat for bear, moose, bobcat and other important indicator species. The Wildlife Habitat Map shows areas of town that have high wildlife habitat suitability ratings.
- 5. Residential development along ridgelines or on slopes greater than 15% is strongly discouraged.
- 6. The clustering of residential development is encouraged. This will result in higher densities on some parcels but will be beneficial to the proper functioning of these lands.
- 7. Home based and small commercial enterprises are important so long as they are compatible with adjoining land uses and do not adversely affect air, water, or scenic resources.
- 8. Employment opportunities based on tourism, agriculture, forestry, and natural resources are encouraged.
- 9. Development along the existing road system is encouraged; the construction of new public roads is discouraged.
- 10. The siting of public utilities should be sensitive to Andover's aesthetic and natural resources. Specifically, the location of a utility scale wind or power generation facility is prohibited from the ridge lines of Terrible Mountain, East Hill, and Markham Mountain.
- 11. Maintain a high quality natural environment that is available and accessible to the citizens of Andover to use and enjoy.

#### Recommendations

- 1. Review the rate of population and housing growth every five years to determine rate of growth.
- 2. Update the zoning and subdivisions regulations on an as needed basis to address growth issues.

# **Relationship to Local and Regional Plans**

Andover is a rural town with a population smaller than that of the surrounding towns. Its two villages, Peaseville and Simonsville, have been identified in the Regional Plan as "historic hamlets" consisting of little if any commercial development. Andover aims to preserve its rural character and the cultural and architectural heritage of these hamlets. Therefore, the people of Andover will continue to depend on the surrounding towns, particularly Ludlow, Chester, and Londonderry for shopping, banking, health care, secondary educational services, employment, and recreation. For the most part, this appears to be a mutually agreeable situation between the towns.

The Okemo Mountain ski resort has the greatest potential for influencing the regional planning picture around Andover in the foreseeable future. Employing approximately 1,200 people during the ski season, the success of the resort is essential to the financial stability of many families in the region. The presence of the resort also has other implications for the region, and for Andover in particular. Regional or multi-town trends in traffic patterns, land use, land affordability, and seasonal home construction should be considered when comparing Andover's Town Plan with that of other towns.

# **Implementation**

The primary purpose of this section is to identify immediate actions which might be taken to achieve the plan's goals and objectives. First, a complete and updated plan is itself a product and an achievement. It 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, the town plan stands as a coherent representation of a community's values as they pertain to the lands of the town. Act 250 requires that developers show their projects conform to the values and priorities expressed in town and regional plans. The town should update this plan as often as necessary, and at least every five years.

During the five-year term of this plan, there are several tasks which have been identified within the plan:

- 1. Review and adjust zoning and subdivision regulations to conform to the goals set forth in the population, economy, housing, natural resources, and land use elements of this plan.
- 2. Continue to participate in regional transportation coordination efforts through the Transportation Advisory Committee and Town and Village Transportation Services.
- 3. Develop access management guidelines for Andover's 3.9 miles of state highway, Route 11.
- 4. Request that the Regional Planning Commission create and update maps indicating the locations of state regulated natural resource constraints.
- 5. Develop a Capital Program and Budget Plan.
- 6. Maintain active and effective representation on the elementary and high school boards.
- 7. Work with regional land trusts and the regional commission on meeting local housing needs.
- 8. Identify areas of significant aesthetic value to the entire community.
- 9. Inventory cultural resources as identified by the residents of Andover.

This Andover Town Plan was adopted this 8<sup>th</sup> day of April, 2013 by the Andover Selectboard.

Harold Johnson, Chairman

Paul Stumpf

Lear Peters

Christopher Plumb

Mark Gordon

Andover Selectboard

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