WALLINGFORD
TOWN PLAN

Wallingford, Vermont

Adopted by the Wallingford Selectboard
February 4th, 2013

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1.0 Vision Statement and Authorization

The Town Plan is an extensive document with many detailed pages of information setting forth goals and objectives. Simply stated, the central concept is:

> **"To preserve Wallingford's historical settlement pattern by encouraging residential and commercial growth in the existing village centers and promoting the continued use of the outlying lands for agriculture, forestry, recreation and other accepted uses as designated by the Town's Zoning Regulations."**

This statement is the theme of this document. It also expresses the key criteria for weighing and judging the appropriateness of the stated goals and objectives.

The Town of Wallingford is authorized to develop a town plan by 24 VSA, Chapter 117, to address the goals set forth in §4302.

2.0 Purpose And Use Of The Town Plan

Upon its adoption, this Plan will serve as a statement of the public policy of the Town of Wallingford, to help guide and facilitate responsible land uses and development, and discourage or redirect inappropriate land uses and development. It is important that those who will seek guidance from or rely upon or utilize this Plan in the future recognize that the purpose of this Plan is not to prohibit or prevent reasonable and responsible land development, or to frustrate or defeat the rights of property owners in the use and development of their property, as long as such land development and the exercise of property rights is in material conformance with the policies and goals of this Plan. It is neither the purpose of municipal planning generally, or this Plan specifically, to regulate land uses; rather, its purpose is to guide the Town in developing and implementing appropriate land use regulations under Chapter 117 of Title 24 of the Vermont Statutes. Accordingly, the use and interpretation of this Plan, including its use in Act 250 proceedings, must include a review of duly adopted zoning and subdivision regulations, and, where the zoning and subdivision regulations and duly issued municipal permits allow certain uses in areas in which this Plan suggests restrictions, such zoning and subdivision regulations and permits must be considered by the District Environmental Commission or the Environmental Board as an expression of the understanding and intent of the people of this town. To do otherwise will be to substitute the will of the Commission or the Board for the express will of the people of this town. It is the express intent of this Plan that such zoning and subdivision regulations are extensions of the Plan itself, and must be considered as the Town's expression of the intent of the Plan. Moreover, where an applicant has obtained a Wallingford zoning or subdivision permit prior to seeking Act 250 review and such zoning or subdivision permit has not been appealed and has not been obtained through misrepresentation or manifest error, such zoning or subdivision permit shall evidence compliance with this Plan.

3.0 Implementation

It is intended that the Wallingford Town Plan be implemented and used as follows:

- *A basis for regulations to be adopted by vote of the people of Wallingford.* The Plan serves as a foundation and guide for the provisions of such zoning regulations, subdivision regulations, impact fee regulations, shoreland bylaws, and flood hazard bylaws as are adopted by the voters of the Town of Wallingford.

- *A basis for community programs and decision-making.* The Plan is a guide and resource for the recommendations contained in a capital budget and program, for any proposed community development program, and for the direction and content of other local initiatives, such as for farmland protection, acquisition and development of recreational land, and housing.

- *A source for planning studies.* Few plans can address every issue in sufficient detail. Therefore, many plans will recommend further studies to develop courses of action on a specific need.

- *A standard for review at the state and regional levels.* Act 250 and other state regulatory processes identify the municipal plan as a standard for review of applications. Municipal plans are important to the development of regional plans and regional and inter-municipal programs.

- *A source of information.* The Plan is a valuable source of information for local boards, commissions, citizens and businesses.

- *A long-term guide.* The Plan is a long-term guide by which to measure and evaluate public and private proposals that affect the physical, social, and economic environment of the community.

4.0 Relationship Between Plan And The Development Trends And Plans For The Surrounding Area

Efforts have been made to ensure that the revised plan for the Town of Wallingford is compatible with development trends and goals set forth by neighboring communities and the Rutland Region as a whole. For the purposes of this Plan, the surrounding area includes the towns of Clarendon, Shrewsbury, Mt. Holly, Mt. Tabor, Danby and Tinmouth.

This plan promotes the preservation of Wallingford's historical settlement pattern through the encouragement of residential and commercial growth in the existing village centers. Consistent with the community's rural nature, the continued use of outlying lands for agriculture, forestry, recreation, low density residential and other accepted uses are also promoted.

Similar objectives, including encouragement of development in appropriate areas, sustainable natural resource use, and limited floodplain development are evident in surrounding towns. The Town of Shrewsbury encourages the continuation of the rural, historical character of the town, a goal in line with the promotion of traditional development patterns of the area. Much of the common border with Mt. Holly and almost the entire border of Mt. Tabor occur within the Green Mountain National Forest. The Town expects that for the foreseeable future all such lands will continue to be managed by the United States Forest Service in a manner compatible with the goals of the Town. The remaining boundary with Mt. Holly involves lands rural in nature with low-density development and related farming or forestry uses. Such uses do not conflict with each other or with the Green Mountain National Forest.

Wallingford continues to have community representatives serve on regional committees such as the Regional Planning Commission and the Rutland Region Transportation Council. Cooperation with neighboring towns can be seen in Wallingford's participation on the Mill River Union High School board and emergency mutual aid agreements with surrounding towns.

The Wallingford Plan is also compatible with the general goals and objectives of the Rutland Regional Plan, most recently adopted in April 2008.

5.0 Community Inventory And Overview

5.1 Location and Setting

Wallingford is located in southern Rutland County, surrounded by the Towns of Clarendon, Shrewsbury, Mt. Holly, Mt. Tabor, Danby and Tinmouth. (Map 1). It is ten miles south of Rutland City, placing it on the fringe of Vermont's second largest municipality.

The physical setting of the town is a reflection of its topography, physiography and land use. Its physiography reflects the fact that different parts of town are found in three of Vermont's five physiographic regions. Physiographic regions consist of areas with distinct combinations of relief, geology, soils and climate.

The eastern two-thirds of the town--including its highest peaks and remotest areas--lies in the Green Mountain physiographic region, while the westernmost one-sixth of the town is part of the Taconic Mountain physiographic region. The narrow corridor running between the two mountain regions is part of the Vermont Valley.

5.2 History

The forests and streams of the Green Mountains and the fertile soil of the Otter Creek Valley provided the settlers of Wallingford with the wood, waterpower, and farmland needed to establish their frontier agricultural community as early as 1780. Wallingford Village, a milling and manufacturing center for the valley farms, developed at the confluence of Roaring Brook and the Otter Creek on the Bennington to Rutland stage road (now US Route 7). To the south, a stage stop along the road evolved by 1830 into the village of South Wallingford. After completion of the Bellows Falls to Rutland railroad in 1849, East Wallingford grew up around a station on that line as a lumbering and manufacturing center. For a time small hamlets devoted to lumbering and milling, including Centerville, Hartsboro and Aldrichville, were active on the forested mountain slopes during the 19th century. Wallingford Village, which became a stop on the Rutland and Bennington Railroad in 1852, continued throughout the century as the commercial and civic focus of the town.

Early settlement in Wallingford progressed slowly, in part because the major transportation routes in the area skirted all but the northwest corner of the town. The old Crown Point Road, blazed in 1759 and used as a major immigration route before and after the American Revolution, ran through towns to the east and north. Prior to 1800, the main road between Bennington and Rutland ran through Tinmouth west of Wallingford, reflecting the greater economic importance of that town in which the 1791 census found 935 residents compared to 538 residents in Wallingford. Some of the first residences in town were built near a road from southern Tinmouth into Otter Creek valley.

Wheat farming in the Otter Creek valley became well established by 1800, and the Bennington to Rutland stage road shifted from Tinmouth to an Otter Creek valley route through Wallingford about the same time.

While most valley farmers raised wheat, Isaac Munson moved to Wallingford in 1814 to raise Merino sheep with the backing of his brother Israel, a Boston merchant. Although the resumption of massive British woolen imports after the end of the War of 1812 had depressed wool prices, the protective tariffs of 1824 and 1828 later boosted them, allowing the Munson's to profit from their farsighted venture.

After Isaac died in February 1835, his other children began farms of their own. His two eldest sons, Elizur and Isaac, divided their father's farm; Elizur living in the family home and Isaac in a substantial brick house that was built on the east side of the Otter Creek. Daughter Louisa lived on the family farm with her husband P. Goodyear Clark, until the couple acquired their own farm in 1839.

Wallingford Village developed after 1800 as a cluster of valley farms around a milling site on the Roaring Branch. Two brick Federal-style farmhouses at either end of the present village were, at that time, surrounded by the barns, stables and sheds of their working farms. A substantial Federal-style brick schoolhouse was erected in 1818 for the village, evidence of the educational aspirations of the fledgling community.

The village soon attracted professionals and tradesmen. Dr. John Fox and attorney Harvey Button had their homes built among the farms. At the main intersection of the village, an inn was built in 1824 with stores, offices, a barbershop and a cabinet shop. Across the street a grocery and dry goods store opened the same year. The construction of two churches - the First Baptist Church in 1827 on School Street, and the First Congregational Church in 1829 on South Main Street - signaled the maturation of the village as the town center.

While Wallingford Village came of age, other small villages developed in town. South Wallingford began as a stage stop at a tavern on the stage road. Gristmills, sawmills and a marble quarry supported its economy throughout the century. Holden Stafford, a miller and merchant in the village, donated land for the South Wallingford Congregational Church in 1840.

In the eastern portion of town, the hill farm hamlet of Centerville evolved into a lumber-milling center during the second quarter of the 19th century. By about 1840, the Pelsue family ran a sawmill on Feller Brook. A district schoolhouse and a number of homes were clustered near the brook crossing. Hosea Pelsue operated a successful sawmill through the 1850's and 1860's.

The Rutland to Bellows Falls railway, constructed through the northeast corner of Wallingford in 1849, created a convenient shipping route for the lumber produced in Centerville. A depot located near a tannery on the Mill River was soon surrounded by the village of East Wallingford, a focal point for trade in eastern Wallingford and western Mt. Holly.

The Rutland and Bennington Railroad, completed through Wallingford Village in 1851, opened up new markets for such local businesses as Lyman Batcheller's pitchfork manufactory, a major employer in the village. Founded in 1835, the Batcheller Works burned in 1848, but townspeople donated money and labor to help rebuild. A stone shop dates from after the fire and is the only building remaining from the manufactory. The works prospered as its pitchforks were shipped by the railroad to a national market.

In the second half of the 19th century, Wallingford Village grew with the successes of local industries. In 1866, the Batcheller Company moved to a larger plant on the Otter Creek, and in 1869, Franklin Post founded a company to compete with the Batcheller Works.

Farmers in the valley concentrated on dairying and stockbreeding after the Civil War and made improvements on their farms to accommodate the expanding size of their agricultural enterprises.

At the turn of the century, Wallingford reached its peak population of over 2000 residents. The first quarter of the 20th century witnessed an important shift in the economy of Wallingford as local concerns were bought by out-of-state corporations and the recreation industry gained prominence. In 1902, the American Fork and Hoe Company of Cleveland, Ohio acquired the Batcheller Works. The Wallingford Manufacturing Company, the heir to Franklin Post's manufactory, was incorporated in 1902, then acquired by the Wellard Vale Manufacturing Company of Canada in 1910.

After 1910, the population of Wallingford began a decline as summer residents attracted by cool air and beautiful surroundings began to occupy what had formerly been working farmsteads. Recognizing the change that was occurring in the regional economy, the American Fork and Hoe Company got involved in the tourist business in the 1920's. Several summer camps were built on land the company owned on Elfin Lake. In 1926, the company purchased the old Wallingford Inn, completely remodeling it in the Colonial Revival style. By 1930, the pitchfork factory had been converted from the manufacture of farm implements to golf clubs and other recreational products.

5.3 Physiographic Regions

The town of Wallingford spans three of the five major physiographic regions of Vermont. The eastern part of the town is in the Green Mountain physiographic region. This part of town contains its highest peaks and most remote areas. The Green Mountain National Forest comprises a significant part of this region. This region covers the area in town east of a line from Bear Mountain to Green Mountain, near South Wallingford.

A narrow valley corridor down the center of the town is part of the region known as the Vermont Valley. This part of the town contains flood-prone areas along Otter Creek, extensive community development and has significant sand, gravel and mineral deposits. Historically, it has been the focus of development in town. The villages of Wallingford and South Wallingford and the main north-south highway, US Route 7, are in this region. It is bounded by the Green Mountains to the east and the Taconic Mountains to the west.

The Taconic Mountain region includes the area in the town west of the Vermont Valley. The area in the town in this region is relatively small, covering mainly the area known as West Hill.

5.4 Geology

The bedrock geology in the town is directly related to the physiographic regions and vice versa. The geologic formations underlying the town occur in the north-south strata that are folded and

steeply dipping. The oldest rocks are in the eastern part of the town and the youngest are in the west.

The Mt. Holly complex, of Precambrian age, is comprised of gneiss and quartzite and underlies the area east of Bear Mountain and White Rocks.

The Cheshire quartzite, of Lower Cambrian age, is perhaps the most noticeable geologic formation in the town. It can be seen on the rocky cliffs of White Rocks, on Green Mountain in South Wallingford and in the area known as Green Hill. This formation occurs on the western flank of the Green Mountains.

The Vermont Valley physiographic region is comprised of several narrow bands of differing geologic formations of Upper Cambrian to Lower Ordovician age. These formations include Dunham dolomite, Monkton quartzite, Clarendon Springs dolomite, and the Shelburne and Bascom formation, consisting of dolomite, limestone and marble. Several of these formations are of commercial value and are quarried in the town. These are the only currently known commercially significant geologic deposits in the town.

The Hortonville formation, of Middle Ordovician age, underlies the major portion of the Taconic Mountains in the western part of town. The rock is primarily black slate and phyllite. It can be observed in road cuts along Vermont Route 140 west of Wallingford village and along the 'Dugway' west of South Wallingford.

5.5 Earth Resources

Sand And Gravel

Sand and gravel deposits underlie several areas of Wallingford with particular concentrations along Routes 7 and 140, and east of TH 15 and TH 24. Map 5 shows both sand and gravel deposits (based on Natural Resources Conservation Service (NRCS) soils data) (formerly Soil Conservation Service) and existing sand and gravel operations. Table 5.5a indicates that about 11 percent of the town is made up of soils with sand and gravel resources. Although sand and gravel may also be found along and in many of the town's larger watercourses, commercial sand and gravel excavation from streambeds is prohibited by State law.

TABLE 5.5a - SAND AND GRAVEL RESOURCES

Type of Soil	Acreage	Percent of Total Land Use
Potential Sand Source	114.0	0.5
Potential sand and gravel source	2972.2	10.8

Source: Rutland Regional Planning Commission

Commercial Mineral Deposits

Commercial mineral deposits underlie a portion of Wallingford primarily along the western side of the Vermont Valley. Map 5 shows location of important mineral resources in Wallingford. According to company officials, there are no significant limestone/marble resources located

elsewhere in the community, other than those under the ownership of the companies in Table 5.5b.

TABLE 5.5b—COMMERCIAL MINERAL DEPOSITS

Mineral Resource	Acreage	Percent
Sand & Gravel	156.1	0.5
Marble/limestone	400.0 +	1.5

Source: Rutland Regional Planning Commission

Significant commercial geologic formations include the Shelburne and Bascom formation, consisting of dolomite, limestone and marble. The material is used for aggregate in construction, and is ground and used for paper, plastic, paint and filler in various products.

Within this commercial mineral zone, several companies operate quarries. In addition, they own mineral and surface rights to areas not yet developed as quarries.

Soils

As an aid to general identification of soil types, the USDA Natural Resources Conservation Service (NRCS)(formerly Soil Conservation Service) has classified, mapped and interpreted the soils in the town of Wallingford while conducting a soil survey for Rutland County. [1]

A soil survey describes soil characteristics and interprets each soil's capability for various uses such as farming, forestry and community development. The soil survey can also be used to help identify prime farmland, wetlands, highly erodible land, floodplains and sources of sand and gravel.

The soil maps for Rutland County are based on aerial photographs, with areas of each soil type and slope class drawn in on the photograph. The scale of these detailed soil maps is 1:18000 (1 inch on the photograph = 1500 feet). The soil maps have also been computerized and are stored in the Geographic Information System (GIS) at the Rutland Regional Planning Commission office. The set of resource maps that accompany this Plan were developed using GIS.

The detailed soil maps for the town reveal that there are over 40 different types of soils in Wallingford. Each soil type has a unique set of characteristics, including color, texture, acidity, and other physical and chemical features. Many soil types are named after the town or village where they were first studied, which explains why many soils have the name of a geographic region. The major soil types have been grouped into 10 soil associations that make up the General Soil Map for the town. (Map 6) These associations are briefly described as follows:

[1] It should be noted that, while the Soil Conservation Service mapping is generally accurate, actual soil conditions determined through on-site evaluations are more accurate in establishing site-specific soil conditions. Accordingly, wherever soil conditions are relevant throughout this Plan, where soil information is derived from on-site evaluations, such information shall control over Soil Conservation Service mapping. It is also the intent of this Plan that SCS mapping should not be used to prohibit development but to alert those who would use or develop their land of soil types and conditions that may exist on their property.

Soil Associations

1a	Hinckley-Hartland-Windsor: Gravelly, silty and sandy soils primarily in the Vermont Valley along Route 7
1b	Colton-Duxbury-Sheepscot: Gravelly soils in the Green Mountains, east of Route 7.
1c	Middlebury-Teel-Limerick: Loamy soils on floodplains along streams. Taconic-Macomber-Hubbardton: Shallow soils with rocky areas in the Taconic Mountains, west of Route 7
2	Dutchess-Bomoseen-Pittsdown: Deeper and wetter soils in the Taconic Mountains, west of Route 7.
3	Paxton-Georgia-Amenia: Deeper and wetter soils in the Vermont Valley, along Route 7.
4	Farmington-Galway: Shallow soils with rocky areas in the Vermont Valley, along Route 7.
6a	Tunbridge-Berkshire-Lyman: Shallow to deep soils with rocky areas in the Green Mountains, east of Route 7.
6b	Peru-Marlow-Cabot: Deeper and wetter soils in the Green Mountains, east of Route 7.
6c	Rawsonville-Houghtonville: Higher elevation soils with rocky areas in the Green Mountains, east of Route 7.

Agricultural Soils

Important agricultural soils are shown on Map 4B, which is based on the NRCS soils data. Among other characteristics, prime agricultural soils have properties and characteristics most favorable to crop production. Some of these properties include good water holding capacity and rooting depth, gentle slopes, good drainage, few surface stones or rock outcrops that could interfere with tillage operations, and good fertility. It should be noted, however, that the fact that certain soil types are classified as "prime" on the NRCS maps does not mean that such soils have sufficient agricultural potential to be classified as "primary agricultural soils". Such factors as parcel size, proximity to active markets and farming operations, and accessibility by mechanized equipment must also be considered, and the value of competing uses for agricultural lands must be evaluated. Accordingly, the evaluation of agricultural potential must be based on many factors, not just soil type. A LESA (Land Evaluation and Site Assessment) system should be developed and should serve as the basis for balancing competing uses of agricultural lands.

Two classes of agricultural soils are shown: *prime* and *statewide. Prime* soils are the best soils and meet the US Department of Agriculture (USDA) national criteria for Prime Farmland. *Statewide* soils are good soils that meet a slightly broader set of criteria for soils of statewide importance. All Prime Soils meet the Statewide soils criteria, as well as the national criteria. Agricultural soils make up less than one-sixth of Wallingford's total land area. Prime soils are found on 1418 acres, or 5.1 percent of the total. Statewide soils are found on 2245 acres, or 8.1 percent of the total land area.

TABLE 5.5c—AGRICULTURAL SOILS IN WALLINGFORD

Class	Acreage	Percent
Prime soils	1418.1	5.1
Statewide Soils	2245.3	8.1
Other	23889.4	86.8
Total	27552.8	100

Source: Rutland Regional Planning Commission

It is important to note that not all areas of important agricultural soils are in farm and crop production. Some areas are in woodland, housing or are idle. Conversely, not all land in farm and crop production are areas of important agricultural soils. Currently, it appears that Wallingford has more areas of good agricultural soils than land that is in crop production.

As of 1997, approximately one-third of the taxes on land in forestry and agricultural use were paid by the State through the Current Use Value Program. The Current Use Program allows owners of resource lands to pay property taxes based on the value of their land in its current resource use rather than the value of their land if developed for some other use. Over 3,000 acres are in the forestry program and about 1,500 acres in the agricultural program.

Forestry Soils

For the purpose of this technical report, important forest soils shown on Map 7, are those soil map units with a relative value of 74 or higher according to the Soil Potential Study and Forest Land Groups for Vermont Soils. (See footnote 1) These forest soils consist of map units in Forest Value Groups 1, 2 and 3 (out of a total of 7). Statewide, soils in Forest Value Groups 1, 2 and 3 cover approximately 40% of Vermont's total land Area.

TABLE 5.5d—RELATIVE DISTRIBUTION OF FOREST SOILS STATEWIDE

Forest Value Group	Relative Value	Approximate % of Vermont Land Area
1	100	7
2	83	15
3	74	18
4	63	24
5	51	22
6	31	10
7	0	4

Source: USDA Natural Resources Conservation Service

Within Wallingford, soils classified as important forest soils (Class 1, 2, 3) make up 42.6 percent of total land area. The distribution of these soils is widespread, being limited in only the rockiest and wettest parts of town.

TABLE 5.5e—FOREST SOILS IN WALLINGFORD

Class	Acreage	Percent
Value Groups 1,2,3	11725.3	42.6
Value Groups 4,5,6,7	15877.5	57.4
Total	27552.8	100.0

Source: Rutland Regional Planning Commission

Soil Suitability for Septic Systems

The key to mapping septic suitability is soil ratings developed by the Federal Natural Resources Conservation Service (NRCS). In 2002, the State of Vermont adopted new regulations affecting on-site wastewater systems. Some significant technical changes were made, including allowing for traditional and mound septic systems to be installed in more shallow, wet, and steep soils that would previously have been considered marginal or unsuitable. These changes have increased the amount of land available for residential development. In response to the 2002 regulation changes, NRCS developed new soil ratings. NRCS has noted the following kinds of soils that are now more likely to accommodate septic systems: floodplains; sloping, wet soils; and steep, moderately permeable soils. Map 8 depicts these changes.

Wallingford village is located in an area of the town with good septic suitability. Other areas with high potential for septic disposal include the areas along Hartsboro Road, along the western edge of the National Forest, and along Mill River. The area covered by Class 1 soils equals roughly 15% of the total, while areas covered by Class 2 and 3 soils cover another 63%.

TABLE 5.5f—SEPTIC SUITABILITY OF WALLINGFORD SOILS

Class	**Suitability**	**Coverage (acres)**	**% of Total Land Area**
I	Well Suited	2,815.30	15.3
II	Moderately Suited	8,621.70	46.9
III	Marginally Suited	3,003.90	16.3
IV	Not Suited	3,543.30	19.3
V	Not Rated	392.40	2.1
Total		18,376.7	100
Conserved Lands		9,145.90	100
Total conserved and un-conserved lands		27,522.6	

Source: Rutland Regional Planning Commission

TABLE 5.5g—SEPTIC SUITABILITY OF CONSERVED SOILS

Conserved Lands (GMNF, Vermont Land Trust, private easements)

Class	Suitability	Acres	% Total
I	Well Suited	835.80	9.1
II	Moderately Suited	3,053.10	33.3
III	Marginally Suited	2,737.60	29.9
IV	Not Suited	2,359.50	25.7
V	Not Rated	159.90	1.7
	Total	9,145.90	100

Source: Rutland Regional Planning Commission

5.6 Steep Slope Areas

Map 4B identifies areas where the slope is greater than 25 percent. Generally, the steepest slopes (greater than 25%) are found around Bear Mountain, White Rocks and Green Mountain along the western flank of the Green Mountains and in the Taconic Mountains west of the Vermont Valley. The area affected by steep slopes is summarized in Table 5.6a. Just over 35% of the town has slopes of less than 15%. Twenty percent of the town has slopes of between 15 and 25 percent, while 13.6 percent has slopes of greater than 25%. Another 31.5 % consists of National Forest soils, which are not rated, but are characterized as "rolling", "hilly", "very hilly", and "very steep".

TABLE 5.6a—SLOPE CLASS IN WALLINGFORD

Slope Class	Acreage	% of Total Land Area
< 15%	9658.0	35.1
15 - 25 %	5470.7	19.9
> 25 %	3757.9	13.6
National Forest Land	8666.1	31.5

Source: Rutland Regional Planning Commission

5.7 Floodplains and Flood Hazard Areas

Several distinct zones make up flood hazard areas. Floodways are areas immediately along side moving water that must be reserved in order to discharge a large flood without increasing the water elevation by more than one foot. Floodplains are areas immersed by water during flooding, including floodways. The 100-year floodplain includes the area flooded, on average, once every 100 years.

Wallingford's most significant mapped floodplain lies along Otter Creek and Mill River. (Map 4A) As shown on Table 5.7a, about 2% of the town is in the floodway, an additional 1.5% is in the 100-year floodplain, and an additional 1% or less is in the 500-year floodplain, for a total of about 4.5% of land potentially affected by flooding.

TABLE 5.7a—FLOOD HAZARD AREAS IN WALLINGFORD

Category	Acreage	Percent
500 year floodplain	187.7	0.7

100 year floodplain	390.1	1.4
floodway	511.1	1.9

Source: Rutland Regional Planning Commission

5.8 Wetlands

Wetland Laws and Regulations

In 1986, the Vermont Legislature passed the Vermont Wetlands Act. Prior to the enactment of this law, primary responsibility for regulating wetlands in Vermont rested with the Federal government. Under federal law, the Army Corps of Engineers and the Environmental Protection Agency jointly administer Section 404 of the 1972 Clean Water Act. Section 404, as amended, regulates the placement of dredged or fill material into wetlands and waterways.

Vermont's 1986 statute does not supersede federal authority, but instead supplements it, although there are some contradictions between the Clean Water Act and the Vermont statutes and rules. The rules implementing the Vermont Wetlands Act designate all wetlands in the State into one of three classes, of which only Class 1 and Class II wetlands are subject to regulation under the Wetlands Rules. Class III wetlands are not of such significant importance to require or to be subject to regulation under the Vermont Wetlands Rules. The particular designation a wetland receives is based on an evaluation of its function and a review of standards specified in the Wetland Rules. The consideration of functional criteria in the classification of a wetland recognizes the vital roles which wetlands fulfill as wildlife habitat, a check on the destructive power of floods, as recreational areas, and as filters to purify polluted water.

Designation of Wetlands

The Class I wetland designation is reserved for only the most significant natural areas. A petition is required to start the process of arriving at this designation. Class I wetlands are defined as those which "in and of themselves are so exceptional or irreplaceable in their contribution to Vermont's natural heritage and therefore so significant (that) they merit the highest level of protection under the rules." Disturbance or development of a Class I wetland is rarely permitted. Parties contemplating disturbance of such a resource must prove that they are not endangering the wetland in any way. There are no Class I wetlands in Wallingford. The Tinmouth Channel, near the western border of Wallingford was classified a Class I wetland in 2001.

Significant wetlands have been designated Class II. The base inventory comes from all wetlands "shown on the National Wetlands Inventory maps for the State of Vermont (1978) published by the US Fish and Wildlife Service". Class II wetlands are those which are significant resources deserving of protection under the Vermont Wetland Rules. The Water Resources Board however, may allow on or off-site mitigation of disturbance in Class II wetlands. There are numerous Class II wetlands in Wallingford which are shown on Map 4A.

Class III wetlands are those that are not designated either Class I or Class II wetlands. Essentially, this means that such wetlands have not been determined to be so significant as to merit protection under the Rules. The extent of these wetlands is not known, however, since they have not yet been inventoried.

Land Uses within Wetlands

Any activity not permitted under the Vermont Wetland Rules in a Class I or Class II Wetland is a conditional use. These activities require a Conditional Use Determination (CUD), administered by the Agency of Natural Resources. A new road in a significant wetland, regardless of its purpose, must go through a CUD. Still, the rules do not constitute a permit process. A CUD is more similar to a zoning variance at the local level. As such, the burden of proof is on the applicant to show that the conditional use will not adversely affect the value and functions of the wetland. An application must be filed with the Department of Environmental Conservation (a division of the Agency of Natural Resources). Also, complete copies of the application must be sent to each town and regional planning commission in which the wetland is located.

Buffer Zones

Vermont's Wetland Rules establish buffer zones around Class I and Class II wetlands. The buffer zone is intended to protect the functions and values of the wetland by remaining a naturally vegetated and undisturbed outer shell. Currently, the Rules designate a 100-foot buffer zone adjacent to a Class I wetland; and a 50-foot buffer zone adjacent to a Class II wetland. Depending on the particular circumstances involved, the protection of a wetland may require wider buffer zones.

Activities taking place inside a wetland or its associated buffer fall into two categories with respect to the regulations. The first category is that of allowed uses. These are exempt from the Conditional Use Determination (CUD) process administered by the Agency of Natural Resources. Farming and logging are considered agricultural or silvicultural activities that are allowed uses. Silviculture in particular is defined in the amended Rules as "those activities associated with the sustained management of land for silvicultural purposes including the planting, harvesting and removal of trees". However, while exempt from the CUD process, such allowed uses in Class I and Class II wetlands and their buffer zones are regulated indirectly through a series of provisions. The Rules state that all allowed activities must not alter the outlet or flow of water in a Class I or Class II wetland. Similarly, no draining, dredging, grading, or filling of Class I or Class II wetlands is permitted except as provided for in the Acceptable Management Practices (AMPs) and the Department of Fish and Wildlife standards for silviculture in deer wintering areas. Other provisions of the Rules restrict road construction, road maintenance, the building of log landing areas, removal of beaver dams and equipment maintenance activities in Class I or Class II wetlands or their buffer zones.

Vermont's Department of Forests, Parks and Recreation publishes a booklet detailing AMPs for maintaining water quality on logging jobs in the State. The AMPs deal with subjects including construction of skid trails, truck roads, stream crossings and log landings. The AMPs began as voluntary guidelines, and are now mandatory. Like AMPs, Accepted Agricultural Practices (AAPs) have been created which seek to maintain water and soil quality in connection with farming activities. The AAPs deal with erosion control, manure handling, pesticide application, cattle in streams, stream fording and bank stabilization. For example, the AAPs state that "animal manure shall be stored at least 100 feet from shallow springs or wells". The AAPs are now mandatory. Agricultural activities in compliance with the AAPs are exempt from the Wetlands Rules. Operations can receive financial assistance from the state for voluntary on-farm

improvements designed to further abate non-point source agricultural waste discharges. These are called Best Management Practices (BMPs).

Local Authority

In addition to these federal and state regulations, Vermont municipalities have the authority to adopt local wetland protection laws. Furthermore, towns may choose to incorporate wetlands protection goals into their town plans. Because of the technical nature of wetland identification, evaluation and regulation, and because wetlands are already extensively regulated at the federal and state level, the Town should avoid adopting wetland regulations which simply duplicate existing regulatory schemes. Moreover, because of the potential for conflicts and inconsistencies between different schemes at the federal, state and local levels, the Town has a duty to its citizens and property owners to take care to insure that any wetlands regulations adopted by the Town are carefully coordinated with existing regulatory programs, so that compliance with one set of regulations will, to the fullest extent possible, constitute compliance with all levels of regulation.

Identification of Wetlands

The term 'wetland' is a broad one. It includes swamps, marshes, sloughs, potholes, fens, floodplains, beaver flowage, mud flats and bogs. The term is often defined as "an area of land saturated or inundated by surface or groundwater for varying periods of time during the growing season".[2] Regardless of their size or type, all wetlands share three basic characteristics. It is those characteristics which make them both unique components of the environment and recognizable as a wetland. The characteristics are:

- the presence of water at the surface for more than 21 consecutive days in any year.
- the types of soils that form in these situations, known as 'hydric' soils.
- the kinds of plants that grow in such conditions and soils.

The values and functions of significant wetlands include:

- providing wildlife habitat.
- storing storm water.
- purifying surface and groundwater supplies.
- recharging aquifers.
- controlling erosion.
- providing areas for recreation.
- serving as educational research areas.

Hydric Soils

Hydric soils have characteristics favorable to the support of wetland vegetation. Not all areas of hydric soils are in wetlands, but they can be used as an indication of wetlands, since all wetlands have hydric soils. A list of hydric soils is available through the local USDA Natural Resources Conservation Service office.

In Wallingford, hydric soils are scattered throughout the town. The highest concentration of hydric soils is on floodplains along Otter Creek and Mill River and in the uplands west and southwest of East

[2] Yuriy Bihun, University of Vermont Extension Service. "Wetland Rules and Regulations: What they mean to your logging operation in Vermont." December 1990, p. 5

Wallingford. The area covered by hydric soils is somewhat limited. Just under 1400 acres, or 5% of the total land area, meets hydric soil designation.

6.0 Existing Land Use Patterns

Land use in Wallingford reflects the historical evolution of the town from a self-sufficient farming community and commercial center to one of an increasingly inter-dependent group of communities. A land use pattern of tightly clustered villages surrounded by open land and scattered farms and residences has given way to a pattern of more diffuse residential and commercial development. Existing land use patterns generally follow the zoning districts reflected in the Wallingford Zoning Regulations adopted in 1972.

Residential land uses are the predominant use of non-federal land in WallingfordPrivately owned woodland was the next most extensive land use recorded in the town, followed by farms and miscellaneous buildings and lots. Despite their significant economic impact, commercial and industrial activities occupied a relatively minor portion of the Town's taxable land area.

6.1 Agriculture

Wallingford is typical of Vermont towns in regard to agriculture. The number of farms in the town has declined steadily since the 1800's. At that time, farms were basically self-supporting units, producing many different crops and commodities. Today, farms are specialized.

Wallingford is home to several commercial dairy and small-scale beef operations.

Sheep, goats, veal, horses and other domestic livestock are also raised, and maple syrup and honey are produced.

Also under the category of agriculture are some vegetable sales, Christmas tree plantations and landscaping/greenhouse operations. Agricultural limestone is also mined in the town.

6.2 Forestry

No concrete data exists as to the actual size or composition of forested areas in Wallingford that exist outside the Green Mountain National Forest. However, 'guesstimates' were provided by the office of the County Forester that represent the type of forest cover generally found on the sites mentioned. On the western edge of town along Route 7, the predominant forest type is a mixture of northern hardwoods. However, a strip of white pine extends along both sides of Route 7 from the Danby border in the south to the Clarendon border to the north. Mixed northern hardwoods cover the majority of Wallingford. In addition to these forest types, a small pocket of oak hardwoods can be found in the northeastern corner of town. Finally, patches of spruce and fir can be found at higher elevations on the Mt. Tabor border within the Green Mountain National Forest. Again, these are only broad-brush estimates of the major forest types that exist in Wallingford, and estimates as to their particular location. The forestlands in Wallingford are broken up and interspersed by active and idle farmlands.

The Green Mountain National Forest comprises 9027 acres of the total of 27,552 acres of land in Wallingford, or about 32% of Wallingford's land area. Wallingford receives Payment in Lieu of Taxes (PILT) from the Forest, but the amount is less than that which would likely be received in taxes if that land were privately owned and managed.

The Town should balance the need for taxes with the advantages of open National Forest Lands when lands come up for sale to the Green Mountain National Forest.

7.0 Cultural And Social Factors And Resources

7.1 Population

The social and cultural setting of the town is a reflection of its past and present population. The population of Wallingford stood at 2,196 in 1996, and had been growing steadily since 1960, when it was 1439. The population had peaked in 2000 at 2,274, an increase of 3.6 %, however it decreased in 2010 to 2,079 (-8.6%).

TABLE 7.1a—POPULATION GROWTH IN AREA TOWNS

	Population 1990	**Population 2000**	**Population 2010**	**% Change 2000-2010**
Wallingford	***2184***	***2,274***	***2,079***	***-8.6%***
Tinmouth	455	567	613	8.1%
Mount Holly	1,093	1,241	1,237	-0.3%
Shrewsbury	1,107	1,108	1,056	-4.7%
Clarendon	2,835	2,811	2,571	-8.5%
Mount Tabor	214	203	255	25.6%
Danby	1,193	1,292	1,311	1.5%
Rutland County	62,142	63,400	61,642	-2.8%
State Vermont	562,758	608,827	625,741	2.8%

Source: Vermont Department of Health, Census 2000 & 2010

Wallingford's populationas a result of two principal factors. First, the population in the town has become significantly older in recent decades. Between 2000 and 2010, the median age of the population increased by 16 percent, from 41.6 to 47.5. Between 2000 and 2010, the number of persons aged 65 or older grew 20.9% from 311 to 376.

Second, the average household size has become significantly smaller. The average household size fell from 3.4 persons per household to 2.32 between 1970 and 2010.

The aging of the local population is the result of the same forces affecting the state and national populations---the large number of residents moving from childbearing age to post childbearing age, the corresponding decrease in the number of children born, and of older children moving out of their childhood homes. Obviously, an older population will have distinctly different needs than a younger population.

The decrease in average household size is the result of a combination of factors. These include increases in the number of single people who choose to maintain independent households, increases in the number of couples who choose not to have children, increases in the divorce rate, maturing and out-migration of children of families of Wallingford households, and increases in the number of elderly persons living alone. Smaller and more numerous households will also place new and different demands on the Town.

7.2 Economic Development and Employment Resources

In Vermont, economic and employment data is reported by County, Town, and Labor Market Areas . Table 7.2a below provides a baseline comparison of population and income figures among towns that form the economic landscape in which Wallingford is located.

TABLE 7.2a—DEMOGRAPHIC - ECONOMIC COMPARISON, RUTLAND COUNTY

Demographic - Economic Comparison of Rutland County Towns

	Population 2002 1/	% Share County	Annual Average Employmt 2001 2/	Average Wage 2001 2/	Effective Property Tax Rate 2002 3/	Average Residential Value 2002 3/	Median Adjusted Income 2001 4/
Vermont	615,611	NA	297,987	$ 30,239	NA	NA	$ 27,694
Rutland County	63,516	100.0%	29,186	$ 27,858	NA	NA	NA
Benson	1,050	1.7%	108	$ 21,415	$ 2.09	$ 74,020	$ 24,218
Brandon	3,893	6.1%	1,651	$ 24,442	$ 2.59	$ 89,027	$ 24,426
Castleton	4,388	6.9%	1,166	$ 23,982	$ 1.86	$ 91,223	$ 25,512
Chittenden	1,188	1.9%	126	$ 20,792	$ 1.82	$ 112,966	$ 30,597
Clarenden	2,786	4.4%	1,050	$ 27,831	$ 2.28	$ 100,633	$ 27,088
Danby	1,298	2.0%	232	$ 26,093	$ 2.44	$ 83,520	$ 24,162
Fair Haven	2,928	4.6%	978	$ 21,847	$ 2.64	$ 80,792	$ 22,722
Hubbardton	764	1.2%	D	D	$ 2.42	$ 114,229	$ 29,260
Ira	459	0.7%	16	$ 18,670	$ 1.91	$ 90,611	$ 35,336
Killington	1,125	1.8%	2,128	$ 20,337	$ 1.41	$ 212,698	$ 25,095
Mendon	1,019	1.6%	380	$ 21,547	$ 2.12	$ 149,300	$ 34,750
Middletown Springs	824	1.3%	70	$ 24,602	$ 2.37	$ 90,765	$ 26,848
Mount Holly	1,248	2.0%	162	$ 25,386	$ 1.88	$ 93,107	$ 26,897
Mount Tabor	203	0.3%	11	$ 17,039	$ 1.98	$ 78,022	$ 26,720
Pawlet	1,403	2.2%	327	$ 22,767	$ 1.80	$ 80,171	$ 22,922
Pittsfield	431	0.7%	128	$ 27,385	$ 1.46	$ 128,956	$ 29,342
Pittsford	3,172	5.0%	845	$ 29,764	$ 2.33	$ 105,682	$ 27,490
Poultney	3,644	5.7%	1,184	$ 23,688	$ 2.13	$ 90,424	$ 23,684
Proctor	1,848	2.9%	357	$ 39,878	$ 3.18	$ 84,748	$ 26,940
Rutland City	17,309	27.3%	13,106	$ 30,105	$ 2.50	$ 83,136	$ 22,873
Rutland Town	4,025	6.3%	3,732	$ 32,421	$ 1.98	$ 136,719	$ 32,066
Shrewsbury	1,108	1.7%	186	$ 22,773	$ 2.33	$ 112,817	$ 29,661
Sudbury	591	0.9%	36	$ 25,292	$ 2.30	$ 104,509	$ 32,088
Tinmouth	574	0.9%	D	D	$ 1.98	$ 89,424	$ 24,577
Wallingford	2,272	3.6%	421	$ 22,406	$ 2.12	$ 99,575	$ 28,820
Wells	1,143	1.8%	116	$ 19,478	$ 1.60	$ 99,022	$ 24,360
West Haven	280	0.4%	D	D	$ 2.29	$ 74,784	$ 31,165
West Rutland	2,543	4.0%	621	$ 22,304	$ 2.39	$ 84,092	$ 24,964

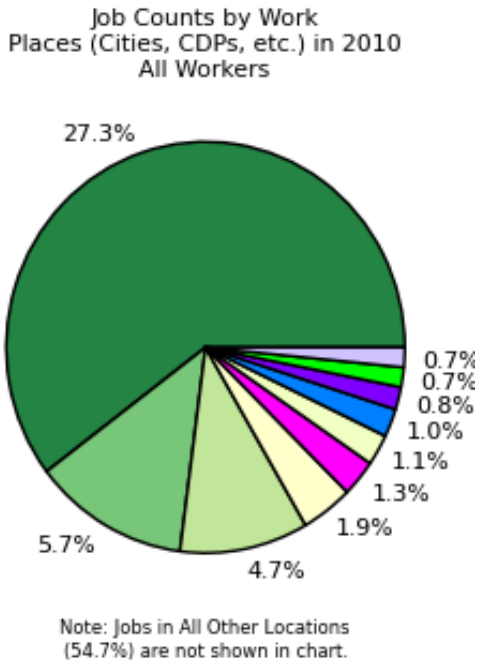
Sources: 1/ U.S. Bureau of the Census.
2/ Vermont Department of Employment & Training; UI Covered Employment (Inc. Gov.)
3/ Vermont Division of Property Valuation and Review.
Residental 1 value is for single family residence on less than six acres. Rate per $100.
County rates calculated based on total taxes assessed and total equalized value.
4/ Vermont Department of Taxes, 2000 Vermont Tax Statistics, Median Adjusted Gross Income by School District. * See Glosary for further details

D denotes data which cannot be disclosed. - (Dash) = 0
NA denotes data is not applicable.

Source: Rutland Labor Market Area Report 2002

Wallingford is part of the Rutland Labor Market Area as designated by the Vermont Department of Employment and Training. Since Wallingford is in many ways a 'bedroom' community whose places of employment are outside the town, it is important to review where Wallingford residents are going for employment, shown in Table 7.2b:

TABLE 7.2b - WALLINGFORD EMPLOYMENT GEOGRAPHY



Jobs Counts by Places (Cities, CDPs, etc.) Where Workers are Employed - All Jobs

	2010	
	Count	Share
All Places (Cities, CDPs, etc.)	996	100.0%
Rutland city, VT	272	27.3%
Wallingford CDP, VT	57	5.7%
Ludlow village, VT	47	4.7%
Burlington city, VT	19	1.9%
Manchester Center CDP, VT	13	1.3%
Springfield CDP, VT	11	1.1%
South Burlington city, VT	10	1.0%
Brattleboro CDP, VT	8	0.8%
Hanover CDP, NH	7	0.7%
Manchester village, VT	7	0.7%
All Other Locations	545	54.7%

Source: LEHD On the Map 2010

In Wallingford, the unemployment rate of 6.4% in 2010 was lower than Rutland County (7.4%) and the same as the State (6.4%) . The relationship with unemployment rates in surrounding towns is shown in Table 7.2c.

TABLE 7.2c—UNEMPLOYMENT RATES IN THE WALLINGFORD AREA

Town	Unemployment Rate		
	2000	***2005***	***2010***
Clarendon	2.7%	3.3%	5.9%
Danby	2.4%	2.7%	5.8%
Mt. Holly	3.0%	3.2%	6.2%
Mt. Tabor	1.8%	7.1%	7.8%
Rutland City	3.0%	3.6%	8.7%
Rutland Town	1.5%	1.7%	2.7%
Shrewsbury	2.3%	2.1%	6.1%
Tinmouth	2.7%	3.6%	4.2%
Wallingford	2.5%	2.3%	6.4%
West Rutland	2.8%	3.4%	10.7%
Rutland Labor Market Area	3.1%	3.7%	7.4%

Source: Vermont Department of Labor, *Not Seasonally Adjusted*

The numbers of persons employed by type of industry follow the trends in the sizing of companies. Table 7.2d shows variance in category of employment over the same period.

TABLE 7.2d—RUTLAND LABOR MARKET EMPLOYMENT, BY CATEGORY

Category	**2000**	**2005**	**2010**
Natural Resources & Mining	410	270	290
Construction	1,056	1,360	929
Manufacturing	3,196	3,048	2,376
Durable goods	2,736	2,689	2,028
Non-durable goods	460	360	348
Trade, Transportation & Utilities	5,626	5,994	5,695
Wholesale Trade	915	791	884
Retail Trade	3,740	4,004	3,684
Transportation & Warehousing	497	724	598
Utilities	474	475	529
Information	444	431	274
Financial Activities	518	840	762
Professional & Business Services	1,945	1,981	1,543
Education & Health	3,665	4,087	4,497
Leisure & Hospitality	3,643	3,513	3,125
Government	3,446	3,688	3,842

Source: Vt. Department of Employment and Training, Labor Market Information Section

Employment increases have occurred in Utilities, Education & Health and Government sectors, while the remainder of Occupations remained roughly the same or decreased over the past decade.
Wages are increasing, although the rate varies by industry sector. Wages by employment category are shown in Table 7.2e.

TABLE 7.2e—RUTLAND LABOR MARKET AREA, AVERAGE WAGE, 2010

Category	Average Annual Wage (2005)	Average Annual Wage (2010)	% change 2005-2010
Natural Resources & Mining	$47,297	$59,119	25.0%
Construction	$33,124	$38,224	15.4%
Manufacturing	$46,719	$52,011	11.3%
Durable goods	$49,124	$55,728	13.4%
Non-durable goods	$28,746	$30,345	5.6%
Trade, Transportation & Utilities	$30,334	$33,789	11.4%
Wholesale Trade	$40,012	$42,342	5.8%
Retail Trade	$23,640	$25,199	6.6%
Transportation & Warehousing	$26,504	$27,898	5.3%
Utilities	$76,506	$85,985	12.4%
Information	$32,532	$48,778	43.8%
Financial Activities	$38,358	$37,270	-2.8%
Professional & Business Services	$39,447	$46,628	18.2%
Education & Health	$35,145	$40,207	14.4%
Leisure & Hospitality	$16,392	$16,434	0.3%
Government	$34,848	$38,751	11.2%

Source: VT Department of Labor

7.3 Housing

The vitality of Wallingford is dependent on the town's ability to house its present and future residents. A sufficient supply of quality housing is the basis upon which a community builds strong, healthy families and a stable workforce, both necessary components of a sustainable economy. Stable affordable housing also lets families establish long-term community involvement.

Housing Need

Nationwide, a trend towards fewer persons per household has changed the type of housing needs and increased the demand for housing, even in towns stable populations.

In order to determine whether that need is being met presently as well as in the future, it is necessary to review housing and income data. Identification of housing needs requires an evaluation of housing demand, housing supply, and the buying power of the Town's residents.

Information about the number and type of units available is important. Table 7.3a provides this information.

TABLE7.3a—HOUSING NEED, CURRENT CONDITIONS

Wallingford Housing 1990, 2000, 2010					
	1990	**2000**	**2010**	**%**	**%**
				Change	**Change**
				'90 -00	**'00 -10**
Total Housing Units	956	1,040	1,088	8%	4%
Owner Occupied	626	729	723	16%	-0.8%
Renter Occupied	171	176	159	3%	-9.7%
Vacant	35	29	65	-17%	124%
Seasonal / Recreational	120	106	141	-12%	33%

Source: U.S. Census 1990, 2000 & 2010

Single family and mobile homes account for a large majority of housing in Wallingford; of the 1,040 housing units in 2000, 83% were single family and 7% were mobile homes. The percentage of multi-family units has decreased 4%. This high percentage of single-family homes indicates the possible need for a greater variety of housing types in order to accommodate all types and sizes of households residing in Wallingford.

TABLE 7.3b—HOUSING UNITS - WALLINGFORD AND SELECTED TOWNS

	Year-round Units			Vacation/seasonal Units		
	1990	2000	% ch	1990	2000	% ch
Rutland Co.	25420	27018	6.3	5761	5293	-8.1
Wallingford	836	934	11.7	120	106	-11.7
Clarendon	1124	1179	4.9	48	28	-41.7
Danby	487	519	6.6	131	128	-2.3
Mt.Holly	456	535	17.3	345	382	10.7
Mt.Tabor	104	104	0	5	17	240.0
Rutland Town	1492	1735	16.3	28	26	-7.1
Shrewsbury	413	435	5.3	68	71	4.4
Tinmouth	182	242	33.0	109	90	-17.4

Source: U.S. Census 1990, 2000

Table 7.3b establishes that housing units are increasing in Wallingford and neighboring towns at a rate, which is double or nearly double to the rate of increase countywide. This is a dramatic increase,

especially since the population has not risen as rapidly. Understanding household size helps explain how the number of households is increasing while the population stays stable.

In 1970, average household size in Wallingford was 3.42. This decreased to 3.03 by 1980, 2.71 by 1990, 2.49 by 2000 and to 2.32 by 2010. The Region followed the same trend with a 2010 household size of 2.28, down from 3.33 in 1970. It is now taking more housing units to accommodate the same number of Wallingford residents.

Housing Affordability[3]

The issue of housing affordability is centered around the fact that everyone seeks adequate housing that is within the household budget, regardless of income A very rough indicator of affordably priced housing is when a household is paying no more than 30% of their gross income on housing costs. National, state and regional indicators identify affordable housing as an issue that is affecting households regardless of socioeconomic status, profession or household type

According to the 2000 Census, over 40% of renter-occupied households in Rutland County were paying more than 30% of their gross income towards housing costs. The National Low Income Housing Coalition reported that in 2001, the fair market rent for a one-bedroom apartment in Rutland County was $541; for a two-bedroom unit, it was $661; for a three-bedroom unit it was $830. The annual family incomes needed to afford the units listed above were $21,640, $26,440, and $33,200, respectively. Over 21% of all family households earned less than $25,000 annually in 1999, according to the 2000 Census. For those families, both two- and three-bedroom units in Rutland County were unaffordable.

TABLE 7.3c—WALLINGFORD HOUSING COSTS 1990-2000

	1990	2000	% Change (1990-2000)
Median Home Value	$92,900	$104,900	11%
Median Gross Rent[4]	$412	$517	20%
Median Household Income	$32,147	$42,417	24%

Source: US Census 1990, 2000—the median value of all owner-occupied housing units. These figures have not been adjusted for inflation.

In Wallingford, this trend has not been as extreme. Between 1990 and 2000, home values have increased 11%. While home values have increased, so has median household income, meaning the buying power of Wallingford's residents has actually increased. See Table 10.3c. Affordability is still an issue though. While median household income increased in relationship to home values, the number of homeowners paying more than 30% of their gross income on housing costs has also increased. In 2000, 24% of homeowners were in this situation. See Table 10.3d.

[3] In the following discussion, the term "renter" refers to specified renter-occupied units, which exclude 1-family homes on more than 10 acres; the term "homeowner" refers to specified owner-occupied unit, which includes only 1-family homes on less than 10 acres.

[4] The amount of the contract rent plus the estimated average monthly cost of utilities (electricity, gas, and water and sewer) and fuels (oil, coal, kerosene, wood, etc.) if these are paid for by the renter (or paid for the renter by someone else). Gross rent is intended to eliminate differentials that result from varying practices with respect to the inclusion of utilities and fuels as part of the rental payment.

The rental situation in Wallingford is improving. The median gross rent has risen 20%, from $412 in 1990 to $517 in 2000. Because of increases in median household income, this increase has not outpaced resident's buying power. The percent of renter households paying more than 30% of their gross income on housing costs has also decreased, from 31% in 1990 to 22% in 2000. See Table 7.3d.

TABLE 7.3d—WALLINGFORD RENTERS/OWNERS PAYING OVER 30% OF INCOME ON HOUSING COSTS (1990/2000)

	1990		2000	
	#	%	#	%
Total Renters[5]	163		157	
Renters paying over 30%	50	31%	34	22%
Total Homeowners[6]	402		438	
Homeowners paying over 30%	63	16%	107	24%

Source: U.S. Census 1990, 2000

Sixteen percent of all Wallingford households are living in potentially unaffordable situations, slightly less than the regional average of 22%, and the surrounding towns of Rutland Town and Tinmouth.

TABLE 7.3e—HOUSING AFFORDABILITY—WALLINGFORD AND SURROUNDING TOWNS 2000

	Renters	**Homeowners**	**Total Households paying over 30%**	**Total Households**	**% of Total Households Paying Over 30%**
Rutland Co.	3,009	2,740	5,749	25678	22%
Wallingford	34	107	141	905	16%
Clarendon	73	108	181	1136	16%
Danby	39	25	64	502	13%
Mt.Holly	24	55	79	494	16%
Mt.Tabor	7	8	15	92	16%
Rutland Town	138	234	372	1691	22%
Shrewsbury	11	24	35	426	8%
Tinmouth	12	78	90	231	39%

Source: U.S. Census 2000

While an analysis of household income and housing costs aids in understanding the affordability of Wallingford's housing, it is understood that affordability can vary greatly based on an individual's particular situation. Affordability is a complex issue that does not relate solely to household income. Other principal contributing factors affecting the affordability of a household's living situation could include:

[5] Renter—refers to specified renter-occupied units, which exclude 1-family homes on more than 10 acres;
[6] Homeowner— refers to specified owner-occupied unit, which includes only 1-family homes on less than 10 acres.

- New construction and rehabilitation costs—the higher the fixed costs for new construction, the less likely that low-cost housing will be added to the market. Factors affecting these costs include complex septic installation, availability and quality of water, materials costs, unpredictable permitting processes and restrictive local regulations.
- Utility Costs—including electricity, fuel oil, and telephone service.
- Finance Rates—depending on national economic trends, interest rates on mortgages can have significant effects.
- Property Taxes—elevated state or local property taxes can result in dramatic costs increases.
- Transportation Costs—if a household is forced to own and maintain one or more vehicles, this must be added into the affordability equation. If, on the other hand, a person can walk or take a bus to work, the costs of living may be reduced substantially.
- Childcare—working parents with children are faced with the challenge of finding daycare that suits their schedules and budgets.

Future Housing Needs

Wallingford's population is not likely to grow significantly in the next ten years. Between 1990 and 2000, the town saw its population grow by only 4%, from 2,184 to 2,274, and fell 8.6% to 2,079 in 2010. This is not to suggest that there is no demand for housing, at an affordable rate, among Wallingford residents.

While the population has decreased recently, there are noticeable shifts in the types of households seeking homes—the population is rapidly aging, household size is decreasing (meaning the need for housing is expanding at a greater rate than the population), and the number of homeowners living in unaffordable housing is increasing. All of these trends point to the need to diversify the housing market of Wallingford, to ensure that a variety of types and costs of housing are available.

7.4 Cultural and Social Resources

The many different social and cultural organizations in town are a testimonial to the wide variety of activities available which contribute to a strong sense of community.

<u>Churches</u>

- Baptist - Wallingford and East Wallingford
- Congregational - Wallingford and South Wallingford
- Catholic - St. Patrick's, Wallingford

<u>Other</u>

- Gilbert Hart Library
- Friends of the Library
- Wallingford Historical Society
- Ladies Aid - Congregational Church, Wallingford and South Wallingford
- Green Hill Homemakers
- South Wallingford Youth Center (Little Red Schoolhouse)
- Rotary International - (hometown of founder Paul Harris)
- Mount Moriah Lodge, East Wallingford
- Eastern Star, Waverly Chapter
- American Legion, Ralph H. Pickett Post # 52

- Maple Valley Grange, South Wallingford

7.5 Historic Resources

Historic resources in Wallingford include buildings, elements of the landscape (scenic areas), archeological sites, artifacts, archives and traditional culture. The thoughtful management of our historic resources will provide the guidelines required to maintain our community's unique identity, heritage, and course of development. Considerable time and effort on the part of several Wallingford citizens during the past few years has been spent on identifying and clarifying Wallingford's historic resources. The Wallingford Village Historic District and the Rural Otter Creek Valley Multiple Resource Area are now officially on the National Register of Historic Places. The National Register of Historic Places is our nation's official list of historical, architectural and archeological resources of local, state and national significance worthy of preservation. To be eligible for the National Register, buildings, complexes, districts,[7] or sites must be at least 50 years old and must be distinctive and well preserved examples of their type and period of architecture, and/or have strong associations with important historical events or persons, and/or have the potential of yielding significant information on our history. Map 9 shows the location of the various historic districts.

Wallingford Village Historic District

We are most fortunate to have the many beautiful historic buildings and landmarks that exist in the Village and throughout the Town of Wallingford. Wallingford Village has in excess of 144 historic structures or sites listed in part in the National Register of Historic Places, dating c. 1807 through c. 1930. A complete listing is provided in The Historic Architecture of Rutland County published by the Vermont Division for Historic Preservation, a copy of which is attached to this Plan as a Technical Report with the permission of the Division.

The following is only a very brief list of prominent buildings or sites in the Village of Wallingford:

- Paul P. Harris Memorial Building, c. 1818. (Schoolhouse attended by Paul P. Harris, founder of Rotary International).
- Wallingford House, c. 1824. (Former True Temper Inn).
- The Old Stone Shop, c. 1848. (Batcheller Pitchfork Manufactory).
- Gilbert Hart Library, c. 1894. (Donated by Gilbert Hart, prominent industrialist and a native of Wallingford).
- The Boy with the Boot, c. 1894. (Donated in memory of Arnold Hill, by his children).

South Wallingford and East Wallingford

The villages of South Wallingford and East Wallingford both contain several historic buildings and sites that are listed in the Vermont State Register of Historic Places. A complete listing is provided in The Historic Architecture of Rutland County, published by the Vermont Division for Historic Preservation.

The Rural Otter Creek Valley Multiple Resources Area

Beginning at the southern edge of Wallingford Village, the Rural Otter Creek Valley Multiple Resource Area extends both east and west of Route 7 to South Wallingford Village. This area is entered on the National Register of Historic Places. Many historic farm homes, barns and sites are located in this area.

[7] A district includes numerous buildings not listed separately.

Settlements of Centerville and Aldrichville

Centerville near East Wallingford was a lumbering settlement in the late 1800's with a sawmill and a factory which made tubs and boxes for packaging butter and cheese. A few older homes of historic nature still remain in the area. Aldrichville was also a thriving lumbering community in the late 1800's situated near Little Rock Pond, east of South Wallingford. Few traces of this historic settlement remain. After the sawmills were moved to South Wallingford, the area was abandoned.

8.0 Community Facilities And Infrastructure

8.1 Town Governance

The Town is governed by an elected Selectboard. Day-to-day administration is provided by a Town Administrator employed by the Board. The Town Administrator administers the budget and serves as the Transfer Station Administrator. The Town Administrator also serves to coordinate other functions of government, which are not under the Administrator's direct supervision such as road maintenance, planning, tax assessment and records.

8.2 Transportation

Primary access to the town is via US Route 7, an arterial highway that is one of the most important non-interstate highways in Vermont. Route 7 has been designated by the State as part of the National Highway System, making it eligible for a separate category of funds within the federal appropriation of funds to Vermont. Highways are the single most important component of the transportation system in Wallingford. They provide for automobile, school bus, and emergency access to all parts of the town. They also provide for the movement of goods and services, and for public transportation and bicycling.

Highways in the town (Map 2) include:

- 16.7 miles of State highway
- 49.9 miles of Town highways
- 3.9 miles of Class 2 highways (7.8%)
- 46.0 miles of Class 3 highways (92.2 %)

Class 2 highways secure important routes of travel between towns. The only Class 2 highway is VT 140 west. Class 3 highways, as the predominant type of Town highway, provide the principal means of access to the adjacent rural, residential and recreational land uses.

Although the private automobile is and will continue to be the predominant means of transportation, other 'modes' of transportation serve Wallingford, including public transit, rail, air, bicycle and pedestrian modes. Marble Valley Regional Transit District's commuter route to Manchester traverses Wallingford and a town Park and Ride lot is located near the recreation area, just west of US7. Sidewalks on both sides of the streets are located within the village center. Improvements to the traffic lights and sidewalks have been made to the intersection of Route 7 and 140 by the State. This project brought the intersection into compliance with the Americans with Disabilities Act.

Longitudinal Employer-Household Dynamics, a program of the US Census, showed in 2008 that the largest percentage of Wallingford's residents work in Rutland City (28.1%) and likewise those who work in Wallingford live in Rutland City (16.7%). However 7.1% of Wallingford residents work in town and 15.7% of those who work in Wallingford live there. This has implications on the transportation network and north-south commuter travel is the major travel pattern.

Bus

The Marble Valley Regional Transit District operates TheBus, which is designed to provide transportation to and from employment opportunities. The Manchester route connects with the Green Mountain Community Network in Manchester, allowing passengers access to areas throughout

Bennington County. Buses pass through Wallingford at varying times, making stops at the Wallingford House, the Cumberland Farm Store and the White Rocks Inn. For times and fares, see their website at TheBus.com.

Vermont Transit provides express services from Burlington VT to Albany NY or Boston MA. While these services pass through Wallingford, VT Transit does not have designated bus stops in town.

Rail

Freight service passes through Wallingford and East Wallingford on tracks operated by Vermont Railway.. Passenger rail via Amtrak is available in Rutland to Whitehall, NY and points south.

Air

Air service is available at the Rutland Southern Vermont Regional Airport, located to the north in Clarendon. A shuttle service connects this airport with major airlines in Boston on a daily basis. Service is also available at Burlington, VT and at Albany, NY.

Highways

As the single most critical and controversial component of Wallingford's transportation system, the transportation infrastructure, traffic volumes and other impacts of US Route 7 through Wallingford Village have caused, and continue to cause, debate and division. Heavy truck traffic, and high traffic volumes generally, have had a negative impact on the quality of life of residents, and, reportedly, on the structural integrity of some of Wallingford's most important historical homes. The annual average daily traffic volume in 2011 noted 4300 vehicles on US7 50 feet south of Hartsboro Road. In 2010 6800 vehicles were counted between Elm and VT 140. On the other hand, a number of Wallingford businesses are dependent on traffic on Route 7 to sustain them. Recognizing these problems, as well as other problems in the greater Route 7 Corridor, the Vermont Agency of Transportation, in 1997, prepared a 'scoping' report on potential improvements to Route 7 from East Dorset to Wallingford. This work involved meetings with town residents and officials, as well as field investigations by professional staff. The Executive Summary of the Final Scoping Report states that,

> "Traffic volumes have steadily increased over the last 30 years along most of the project length and are projected to continue increasing into the next century. However, the daily traffic volumes today as well as the future projected traffic volumes can be accommodated on the existing highway with corridor improvements and management techniques identified in this Final Scoping Report and the accompanying Access Management Plan. Widening for additional travel lanes as well as a bypass freeway type roadway are clearly unwarranted well into the future and are not proposed."

The recommended alternative was to rehabilitate with two, 12-foot lanes and 8 foot shoulders in the general corridor. Widening in the Wallingford and South Wallingford Village area was limited to minimizing impacts to historic resources. Future improvements in the Wallingford Village area include:

-
- Maintaining pavement markings.
- Maintain low speed limits in the village areas.

All improvements should be coordinated with the State Historic Preservation Program.

The Scoping Report continues by recommending that the Town coordinate with the Rutland Regional Planning Commission to discuss means of further evaluating improvements in the Wallingford Village area. Recommended for discussion are:

- long term conversion of the existing angle parking to parallel parking.
- elimination of parking within 20/30 feet of the intersection of Routes 7 and 140.
- improved pedestrian facilities and landscaping.

The Report acknowledges that "future access management plans for this segment recognize the considerable historic and community resources in this area. Transportation plans must recognize this fact and develop solution(s) with traffic calming and reduced design speeds as major considerations."

There is also a need for improvements to the sidewalk system throughout the village, as well as improvements or additions to curbing and drainage. On Route 7, all these improvements should be incorporated into a single project, which may need to be done in stages depending on funding. State transportation funds include an allowance of up to 10% for enhancements, which include such items as sidewalks. The Town and the Prudential Committee should lobby hard for the inclusion of sidewalks.

There are several other areas of concern in the transportation network in Wallingford, but the most severe of these is the highway under the rail trestle on Route 103. The geometrics of the highway cause frequent accidents at this site. This project was dropped from the FHWA and AOT lists due to lack of activity over a prolonged period because of associated environmental impacts. AOT has found that relocating the roadway to address this area is unfeasible due to extensive floodplain impacts from the proposed project**.**

Other projects in the Agency of Transportation's Capital Program include the Rail bridge #145 in East Wallingford and 2 new Town Highway bridges that the Rutland Region Transportation Council included on the Region's list are replace bridges #59 on Creek Road (TH2) and #7W on Depot Street.
Analysis of crashes from 2006-2011 data show a_large number of crashes on US 7 , which included one fatality, and VT 103 with fewer. Class 2 and 3 local roads experienced a significant number – 7- on VT 140. The programmatic corridor is Tift Road (TH-52) which would be an ideal candidate for a Road Safety Audit review. Projects are nominated and the Transportation Council forwards candidate sites to VTrans. Representation at the Council meetings is key to moving projects forward and also learning about grant opportunities.

8.3 Municipal Water Service

Municipal water service (as distinguished from private or on-site wells or water systems) is provided in Wallingford by the Wallingford Fire District # 1 and by the South Wallingford Water Cooperative.

Wallingford Fire District # 1

Wallingford Fire District # 1 was created in 1906 to provide water to the residents of the main village area of Wallingford. The Wallingford Water Company constructed the system and the system's 35,000-gallon reservoir in 1908. A 140,000-gallon reservoir was constructed by the District in 1942.

Operation of Wallingford Fire District # 1 is overseen by a Fire District Prudential Committee. Members of the Prudential Committee are elected to their positions by the residents of the area served by the Fire

District. In addition to providing water service, Fire District # 1 also provides the village with sewer and fire protection services.

Water Sources

The service area for Fire District # 1 includes all of Wallingford village. Fire District # 1 services over 350 connections.

Water stored at the Fire District impounding area is delivered to users via a roughly 3000 foot long, 10" galvanized water main alongside Route 140. This main carries water to an 8" line just east of Hillside Street before reaching the village.

The total quantity of water available is, for all practical purposes, limited only by the size of the water system mains. Spring Number 2 has a rated yield of 165,000 gallons per day, while Roaring Brook, though unrated, has enough flow to meet essentially all of the village's needs. Indeed, even if Spring Number 2 were the only source of water for the system, capacity would not be a problem. Assuming water quality does not pose a problem, demand could increase by 50% and virtually all needs could be met.

Recent improvements to the system include a new water holding facility on Church Street in 2000, as well as a new pumping station. The new reservoir was installed to bring the Fire District into compliance with State and Federal drinking water standards.

Growth over the next 10 - 15 years may increase demands on the system, although probably not to the point of overburdening it. Population projections prepared for the service area by Wright Engineering indicate that demand should reach approximately 232,000 gallons per day by the year 2040. Interpolated, this would represent an average annual increase of roughly 2400 gallons per year, well within current volume capacity.

New connections within the District are made routinely upon payment of a $250 connection fee. A tap is placed on an existing main and a curb stop installed, the maintenance of which is the responsibility of the water user. If there is an existing curb-stop, a $25.00 paperwork fee is charged to the prospective user. The prospective water user must also file an application before the Prudential Board. Once these steps are completed, the District's inspector makes sure that all internal plumbing and plumbing connecting the structure to the curb-stop meet State regulations.

South Wallingford Water Cooperative

The South Wallingford Water Cooperative was originally started in the early 1900's to meet the water needs of South Wallingford Village. It is a private, non-municipal organization. Water for the Cooperative comes from two springs located east of the system on Green Hill. Water obtained from the springs is of consistently high quality. Bad samples from the system are very rare. The delivery system for the Cooperative consists of a series of 3" and 2" galvanized steel lines. Individual users are serviced by lines of 1" or 3/4".

Since this water supply is also a surface source, and because the system is classified as a 'community water system' by the state, it is subject to the same state and federal requirements for improving the purity of the water.

The Cooperative has *29* connections. Average daily demand by users of the system, who are almost exclusively residential, is approximately 13,050 gallons per day. The system's total supply, represented by maximum daily yield of its supplies, is estimated at 28,800 gallons per day.

8.4 Sewage Collection, Treatment and Disposal

Sewer service in Wallingford is provided by the Wallingford Fire District # 1. The District owns and operates a secondary level treatment sewage plant that is located behind Shaw's Sales and Service in the village. As a secondary level facility, the plant includes an oxidation ditch, chlorine contact tank, clarifiers, and sludge drying beds. The plant was constructed in 1970 using funds from the U.S. Environmental Protection Agency and has permitted capacity of 120,000 gallons per day.

The average daily flow in 2010 was approximately 70,000 gallons per day. The flow varies considerably depending on weather conditions. During rainy periods, the plant has treated over 100,000 gallons per day. Much of this fluctuation is due to infiltration through basement sump pumps hooked into the system, as well as manholes that allow inflow into the system.

Roughly 400 customers are connected to the system. Of these, approximately 350 connections are for residential uses, 5 are for municipal uses, 29 are for commercial uses, 7 are institutional uses and 1 is a manufacturing use.

An additional factor in maintaining capacity is the elimination of inflow and infiltration of storm and runoff waters into the piping system carrying wastes to the treatment plant. As sewer mains age, openings in the system allow the infiltration of surface and ground water. In addition, roof drains on older homes, and basement sump pumps may be connected into the system adding volume that causes the plant to exceed treatment capacity, resulting in the discharge of untreated wastes to Otter Creek. According to system representatives, they are beginning to identify such sources and producing plans to eliminate the excess flowage. The district is continuously making small changes to improve the efficiency of the system. Because sump pumps have been identified as a large contributor to the infiltration problem, plans are being made to pursue and address this problem.

Sludge currently generated by the plant during winter operations is transported by the Rutland County Solid Waste District, of which the Town is a member, to Glens Falls, NY for disposal. Sludge generated in the summer can be treated and stored in the expanded and reconstructed sludge beds at the treatment plant.

The area served by the treatment plant takes in the core of the village. Users of the treatment plant are serviced by a series of gravity feed lines.

Future growth will increase demands on the system, intensifying the need for system improvements. Population projections have not been prepared for the sewer service area. Some capacity will be able to be reclaimed by elimination of inflow and infiltration

8.5 Solid Waste Disposal

The Town of Wallingford is a member of the Rutland County Solid Waste Management District, (RCSWMD) which has the responsibility for managing the solid waste generated in the town. Wallingford maintains a Transfer Station located on Route 140 for collection of solid waste and

recyclables. Wallingford has a strong recycling program, collecting glass, newspaper, cardboard, tin cans, aluminum cans, plastic milk jugs, and colored plastic containers. Wallingford is also participating in the RCSWMD magazine/junk mail collection system, and in the Household Hazardous Collection program operated by the District.

TABLE 8.5a—SOLID WASTE GENERATION, IN TONS

	2007	2008	2009	2010	2011
Waste	558.30	617.01	550.02	582.47	583.51
Recycling	171.70	191.97	168.12	167.73	173.93

Source: RCSWMD

The RCSWD Implementation Plan, updated in 2008, outlines the district's waste diversion goals. The statewide goal to decrease per capita waste generation from 3.36 pounds per day to 2.7 pounds of waste per day will also be met through these goals. These address four main areas:

- Reduction of waste generated,
- Increase reuse,
- Increased recycling in the residential, resort/tourist, construction, demolition and commercial sectors. Increase participation, collection efficiencies, and recycling of organic and other types of waste. Decrease incineration and disposal or recyclables,
- Implement ongoing waste diversion education and outreach program for schools, youth, consumers and businesses.

8.6 Fire Protection Services

Wallingford Fire District # 1 provides fire protection service to all of Wallingford, including Wallingford Village, East Wallingford and South Wallingford. In addition, East Wallingford has its own Fire Department.

Wallingford Fire District # 1

A group of 57 volunteers make up the regular fire-fighting force of the Wallingford Fire District. In 1997, there were 32 senior fire fighters, 12 junior fire fighters and 13 auxiliary members. The Wallingford Fire District also has an extremely active Junior Fire Fighting Force made up of high school students who have received fire-fighting training. The Junior Fire Fighters are able to operate all the fire equipment and serve as a vital back-up force for the regular volunteers.

Training is an important part of fire fighting. Consequently, all fire fighters involved with the District are required to take a training course to become part of the force. In addition, they are required to drill one night each month to maintain their skills.

Fire District # 1 currently has two station buildings. The main building is located in Wallingford village and has 4 bays. A new satellite building was donated by OMYA, Inc. for $1.00/year rental to provide space for a pumper truck and a tanker truck. This satellite facility will cut response time to South Wallingford by an estimated 15 minutes.

The Fire District has a 1250 gallon per minute (GPM) pumper with a 1,000 gallon tank, 30 gallons of foam and the Hurst Extractor Tool ('Jaws of Life'), a 1,000 GPM pumper with a 1,000 gallon tank, a 750 GPM pumper with a 350 gallon tank, a 500 GPM pump mounted on a trailer, a 1,200 gallon tanker, a support van, and a jeep for fighting forest fires equipped for 14 men. The Fire District also maintains a 1936 parade truck. There are future plans to replace the aging 750 GPM pumper truck.

Wallingford Fire District # 1 maintains a mutual-aid network with Clarendon, Danby, East Wallingford, Rutland City, Rutland Town and Tinmouth. Calls go out based on the size of the emergency and the availability of sources.

East Wallingford Fire Department

The East Wallingford Fire Department, organized as Wallingford Fire District # 2, has 10 active members, as well as a 14-member auxiliary. Equipment operated by the Department includes a 750 GPM pumper with a 500 gallon tank (1979 model), a 1,200 gallon tanker with dumping capability, 350 GPM pump and foam capacity (1986 model), two portable pumps, 2,000 feet of 2.5" hose and a similar length of 1.5" hose. Equipment is housed in a station in East Wallingford Village.

Training takes place on an on-going basis. Training is held at regular monthly meetings, as well as at special fire fighting schools.

As a municipality (a fire district), funding for the East Wallingford Fire Department is raised by a district property tax. This revenue is supplemented by the fund raising activities of the Fire District Auxiliary. A Prudential Committee is responsible for the overall affairs of the District.

The number of fire responses by the Department has averaged 6-15 per year. Roughly 1/2 of the calls were for the mutual aid network it maintains with surrounding communities.

8.7 Emergency Response

Except for that portion of East Wallingford which is served by Mt. Holly Rescue, most of the town is covered for emergency response services by Wallingford Rescue. The primary emergency facility to which patients of both Wallingford Rescue and Mt. Holly Rescue are transported is the Rutland Regional Medical Center.

Wallingford Rescue

Wallingford Rescue is a volunteer organization currently consisting of 19 members including 2 Emergency Medical Technicians (EMTs), 2 EMT-1s, 2 EMT-Ps, 3 EMT-Ds, 1 EMT-EOA, 2 registered nurses and 7 Emergency Care Attendants (ECAs). Reflecting the group's emphasis on training, all members must have as a minimum ECA State certification. The Squad also conducts at least 30 hours of training annually.

The E.M.S. District # 10 "Disaster Plan", which is coordinated by the State's Emergency Health Division, governs part of the method of operations of Wallingford Rescue by detailing plans to handle mutual aid. Under the Plan, the primary back up for Wallingford Rescue is the Regional Ambulance Service based in Rutland. In an effort to meet emergency service needs of neighboring communities, Wallingford Rescue also covers the Town of Tinmouth.

Wallingford Rescue currently has two ambulances; one a four-wheel drive 1983 model, and the other a two-wheel drive 1990 model. These vehicles carry standard medical equipment as well as apparatus for advanced life support. The Rescue Squad is dispatched by the Vermont State Police. The Rescue Squad has been dispatched by the Rutland Regional Medical Center as well as locally at various points in recent years. A long-term arrangement for dispatching is likely to develop with the establishment of a countywide dispatching service connected with Vermont's statewide E-911 system.

The number of calls to Wallingford Rescue has ranged from a low of 92 (in 1991) to a high of 170 (in 2003). Similarly, average weekly demand has ranged from 1.77 calls per week to 2.52 calls per week. The number of calls responded to by Wallingford Rescue has averaged 175 per year.

Funding for the Rescue Service comes from local fund-raising efforts and an allocation at Town Meeting. Because the cost of operating the service has increased dramatically in recent years, the Squad is exploring the possibility of billing insurance companies of patients who carry comprehensive health insurance policies.

Mt. Holly Rescue

Mt. Holly Rescue is a volunteer organization currently consisting of 15 volunteer members, two of whom live in East Wallingford. All members are highly trained. Four of the Squad's members have Emergency Care Attendant (ECA) certification. Eleven members have Emergency Medical Technician (EMT) certification, while four are EMT-1s and two are EMT-Ds. Members of the Squad meet twice a month to continue to upgrade their service and improve their skills. Dispatching is done by the Vermont State Police. This may change depending on the dispatching system organized under the State's new E-911 system.

Equipment maintained by Mt. Holly Rescue currently includes one 1983 ambulance and one 1990 ambulance, along with many specialized first aid devices.

The total number of calls responded to by the Squad in recent years has averaged 115 per year. Calls to East Wallingford typically take up between 10 and 22% of the total.

8.8 Public Safety/Police Protection

Public safety in the town is provided by the Rutland County Sheriff's Department, the Wallingford Town Constable and the Vermont State Police.

According to statistics compiled by the Vermont Department of Public Safety in conjunction with the Division of Criminal Justice, the crime rate in the community is well below the regional average. In 2010, crimes occurred at a rate of 18.07 per 1,000 population in Wallingford compared to a county rate of 43.23 per thousand. In actual numbers, there were 42 crimes in 2010, consisting of 1 Forcible Fondling, 1 Theft from Motor Vehicle, 1 Drug/Narcotics Violation, 2 Intimidation, 2 Theft from Building, 3 Simple Assault, 3 False Pretense, 6 Destruction of Property/Vandalism, 10 Larceny-Other, and 12 Burglary/B&E.

8.9 Emergency Management Activities

Wallingford has been involved in several activities related to emergency planning. The town adopted a Basic Emergency Operations Plan in 2012. This plan helps coordinate and facilitate response activities

in the event of an emergency. In 2004 and 2009, the town took part in regional hazard mitigation planning efforts. The creation of a Hazard Mitigation Plan improves the community's ability to mitigate for future disasters, lessening the financial, social and environmental impacts stemming from possible disaster events. The creation of the Hazard Mitigation Plan ensures accessibility to Federal Emergency Management Agency funds to aid in mitigation projects and disaster recovery efforts.

Identified mitigation strategies included:

- Continuing upgrades and maintenance of culverts to accommodate high water flows,
- Alleviating the frequently flooded section of Hartsboro Road through consulting with appropriate specialists and engineers;
- Obtaining Red Cross approval of town emergency shelters,
- Installing wiring needed for installation of portable generators in the Town Hall and Elementary School,
- Continuing emergency evacuation drills with vulnerable populations in town,
- Continuing support of State-led widening/straightening of Rt. 7, specifically the accident prone section in South Wallingford,
- Partnering with the State to solve water contamination caused by sewer system overflow, and;
- Protecting town records by retrofitting town offices.

8.10 Energy and Communication

Energy Use

Residential: Most of the residences in Wallingford use as their primary heat source either oil, propane (bottled gas), or wood, although some use electricity as a primary or secondary heat source. In those residences where the domestic water supply is not heated by a central heating system (furnace) it is normally heated by propane or electricity. Some homes use passive solar radiation as the primary heat source, although many depend to a greater or lesser extent upon passive solar for a portion of their heating needs.

Agricultural: Active farms are significant energy users, depending primarily upon electricity for barn lighting, milk cooling and other motor operated barn equipment. Field work is performed by tractors, which are predominantly diesel operated.

Public Buildings: The Wallingford Elementary School and the Town Office are heated with oil. The Town Garage uses oil and some wood.

Electricity

Electrical service in the town is currently provided by Green Mountain Power (GMP), formerly Central Vermont Public Service, who serves electric customers in Wallingford through its Rutland District office in Rutland City. The right-of-way for the main transmission line of 46,000 volts runs north-south along Route 7. A small section of another 46,000-volt line runs through the western corner of the town. The lines are linked to both hydroelectric and gas turbine facilities.

The pattern of use of electricity in Wallingford is typical of communities of its size and type. Representatives of GMP indicate that electricity was used by town residents primarily for cooking, lighting, and refrigeration.

Some residences and farms have the capability to generate electricity through the use of renewable energy systems such as photovoltaic panels, windmills, and biomass.

Oil
Heating oil (Number 2) is delivered by several local vendors to the users' storage tanks.

Propane
Propane is delivered by local vendors to customers, either in form of fully charged cylinders or by tank trucks which meter deliveries into storage tanks at the users' locations.

Wood
Most fuel wood is harvested from small privately owned woodlots or purchased from nearby suppliers.

8.11 Communications

Communication services in Wallingford include local and long distance phone service, cellular phone service, cable television and Internet service.

Telephone Service
Local telephone service is provided by VTEL, a Springfield, Vermont telecommunications company. VTEL offers a basic phone service and Internet access. The State of Vermont has begun the process of deregulating local phone service. It is anticipated that, in the near future, residents will be able to choose their local phone service provider.

Telecommunications Facilities
Wireless telecommunications facilities are defined as land facilities supporting antennas and microwave dishes that send and/or receive radio frequency signals. These facilities include structures, towers, antennae, microwave dishes, and associated accessory buildings. There is currently a commercial wireless telecommunication facility at the Town Hall . The Town should remain current with developments in the telecommunications industry and, at some time, may want to adopt more comprehensive review criteria.

Currently, full cellular coverage is available along the Route 7 corridor.

8.12 Library Services

Library services are provided to the community by the Gilbert Hart Library. The library is housed in an historic structure that was built in 1894 with funds donated by Detroit industrialist, Gilbert Hart, who was born in Wallingford. It is governed by an unpaid board and is managed by a part-time paid librarian. Volunteers also donate their time to assist in the operation of the library,, including evening and weekend hours.

The library is open 34 hours per week, Tuesday through Saturday, and meets standards set by the Vermont Department of Libraries. On average 700 adult and 75 juvenile patrons visit the library each month, and monthly over 700 items including large print books, periodicals, movies, audiobooks, and fiction and non fiction books circulate among the patrons. Beginning in 2012, online access to the catalog allows card holders to renew and place holds on books from home. Additionally downloadable audios and e-books are available for patrons to access through a separate website using their library number. The library hosts several programs for adults throughout the year including VT Humanities presentations, movies, and book discussions. During the summer months children visit for special programs, story hours, and performances. Visitors are also able to read local papers, use the public computers, and access the internet for their own computers.

Funding for the library comes from several different sources, including a membership drive, grants, and an annual allocation from the Town of Wallingford. The "Friends of the Library" sponsor fund-raising events, including an annual plant sale, dinner event, monthly whist parties, and an extensive book sale.In 2004, extensive renovations increased the size of the library and made all three floors handicap accessible. The community meeting room is now substantially larger. The heating, plumbing and electrical systems have all been upgraded as well. Wifi is available throughout the building. Groups such as Bone Builders and a yoga class use the community room on an ongoing basis. Through an arrangement with the Department of Libraries, books may borrowed from other libraries using an interlibrary loan service when applicable. The library truly attempts to meet as many requests of patrons for materials as possible. Monthly communication from the library and information about events can be found in the town newsletter and on the town website.

8.13 Childcare

Ensuring accessible, affordable, quality child care is integral to sound economic development planning. In Wallingford, there are currently two licensed child care providers. These providers are shown on Wallingford's Utilities and Facilities Map (Map 3A).

To understand better the ability of these two facilities to meet the child care needs of Wallingford families, an analysis of the number of children estimated to need care, and the type of care needed is necessary. In Wallingford there were 308 children under the age of 14 in 2010. Ninety two, or 30% of these children are under the age of 5. The number of children under the age of 5 has increased by 13% between 2000 and 2010, after a decrease of 21% between 1990 and 2000.Although not a significant incline, this could indicate the potential for an increasedneed for child care in the town over the next five years.

TABLE 8.13a—WALLINGFORD TOWN—CHILDREN AGES 0-13 YEARS, 1990 / 2000

Age	1990	2000	2010	% Change 2000-2010
Under 5	102	81	92	13%
5 - 14 years	268	241	216	-12%
Total	442	379	308	-19%

Source: U.S. Census 1990, 2000, 2010

The employment status of families with children can affect their childcare needs. In2000, 13.1% of the population was employed by service sector jobs. Parents working in this sector may need child care services that are available during non-traditional hours (evenings, nights and weekends).

The information provided here begins to analyze the childcare situation in Wallingford. Further assessment of the situation should be performed to determine the strengths/weaknesses of the available childcare infrastructure, the extent to which informal childcare providers are meeting the determined need, and the extent to which childcare providers outside of Wallingford are filling the needs of Wallingford families.

9.0 Education

9.1 Wallingford Elementary School

The Wallingford Elementary School, located on a seven-acre lot on School Street, was constructed in 1952 and expanded in 1969. In 1992, two temporary classroom units were added. Instruction at the school is provided in a range of traditional subject areas. The school also offers library services, music and art instruction, guidance counseling and special education.

Operation of the school is governed by a five member volunteer school board. Members of the board, who set policy and present the annual budget to voters at Town Meetings, are elected on a staggered basis for two and three year terms. Paid staff at the school includes the principal, 18 full-time teachers, and 13 part and full-time instructional support staff. Staffing levels change in response to shifts in the school population, changes in the school's programs and budgetary decisions.

Attendance at the Wallingford Elementary School is open to children in pre-kindergarten through grade six who reside in the Town of Wallingford. Although primarily a place of learning, the school serves as a community center and is available for varied activities. For example, the school is used by community groups such as the Girl Scouts and Boy Scouts, volleyball and basketball leagues, church organizations, and civic groups. The school is also used for Town Meeting, the Annual School Meeting, meetings of Fire District # 1, and other public meetings related to town governance.

In 2012, enrollment at the school was 146 (See Table 9.1a). Between 2000 and 2005, enrollment was steadily dropping.

TABLE 9.1a—WALLINGFORD ELEMENTARY SCHOOL ENROLLMENT, 2009-2013

School Year	Enrollment
2009-10	124
2010-11	128
2011-12	146
2012-13*	130
**Projected*	

Source: Wallingford Town Reports

The capacity of the school is estimated at 240-250 students. This estimate of capacity recognized both physical and program constraints and is based on the results of the Vermont Public School Approval (PSA) review program. Currently, the school is well below full capacity.

Extensive renovations to the school's plumbing, heating, electrical and fire safety systems have been completed to meet applicable building, fire and safety codes. Other more recent projects include an energy efficient lighting retrofit, preventative maintenance on the heating system. Capital improvement projects are needed to address the following area:

- Replacement of the roof

Capital equipment owned or controlled by the school includes busses, a light tractor, playground equipment, computers and office equipment. Of the two busses maintained by the school, one is a handicapped accessible vehicle with a wheelchair lift. The light tractor is used for grounds maintenance. The playground equipment is used for recreational purposes and meets current needs. Substantial improvements to the playground have been made through the efforts of a parent volunteer playground committee.

9.2 Mill River Union High School

Wallingford sends secondary school students (those in grades 7 - 12) to Mill River Union High School. MRUHS, which was built in 1975, occupies a forty-acre parcel on Middle Road in Clarendon. A major addition was completed in 1996-97. A variety of secondary, vocational-technical, and college preparatory classes are offered. The facility also boasts a fully equipped drama unit and stage, music facilities, and home economics and industrial arts areas, including a kiln, a darkroom, printing presses and a small engine repair shop.

Wallingford's share of the cost of operating MRUHS has decreased in recent years due to the decrease in Wallingford's high school-aged population. The Town makes its contributions to the school based on the number of students from Wallingford who attend Mill River.

Attendance at Mill River Union High School is open to all students in grades seven through twelve who reside in the towns of Clarendon, Wallingford and Shrewsbury. The school also accepts tuition students.

Recent population projections and elementary school enrollments suggest that the number of secondary school students at MRUHS will remain stable. Existing data from current class sizes at Wallingford Elementary School leads us to believe that Wallingford's percentage of the total enrollment at the high school will decrease as the current elementary population reaches the junior/senior high school level.

TABLE 9.2a—MILL RIVER UNION HIGH SCHOOL ENROLLMENT, 2009-2013

School Year	Enrollment
2009-10	152
2010-11	144
2011-12	142
2012-13*	148
**Projected*	

Source: Wallingford Town Reports

9.3 Stafford Technical Center

Students from MRUHS may enroll in classes at the Stafford Technical Center. The Center, built in 1974, is located in Rutland City and provides secondary technical/vocational education to junior and senior high school students and adults throughout the Rutland Region. Thirteen students from Wallingford were enrolled in various programs at the Technical Center for the 2003-2004 school year. Students may choose from the following programs: Automotive Technology, Computer Information Systems and Accounting, Carpentry, Culinary Arts, Electrical/Plumbing, Forestry and Natural Resources, Health

Services, Human Services, Manufacturing Technology, Marketing, Office Technology, Power Mechanics, Principles and Applications of Technology, Video/Media Technology, and Student and Registered Apprenticeships.
The Superintendent of Rutland South and one Member from the Mill River Union High School Board are part of an Advisory Committee, which meets monthly and assists with the governance of the Stafford Technical Center.

Stafford Technical Center also offers vocational training and online courses for adult education.

9.4 Private Preschool, Elementary and Secondary Schools

Private elementary education facilities are available outside the community to residents of the town on a tuition basis. They include: Rutland Area Christian School, Mountain View School and Christ the King in Rutland. Private secondary school facilities available to residents on a tuition basis include: Mount St. Joseph in Rutland, and The Long Trail School in Dorset, and Burr and Burton Academy in Manchester.

9.5 Rutland South Supervisory Union

Administrative and support services are provided by the staff of the Rutland South Supervisory Union. The Supervisory Union comprises the districts of Wallingford, Shrewsbury, Clarendon and the Mill River Union High School. It provides administrative, financial and purchasing support, employment services, training, special education personnel and various other services to the three elementary schools and to MRUHS. The Supervisory Union governing board consists of representative members from the three town school boards and the MRUHS Board.

9.6 Vermont Adult Learning

Vermont Adult Learning's Adult Basic Education (ABE) program works with adults who want to finish secondary school or learn literacy skills to improve their lives. ABE provides tutoring in reading, writing, math, English as a Second Language, and GED. Programs are also offered in life skills. One-to-one and small group tutoring is available for adults (age 16 and over) who do not have a high school diploma or cannot read and write. The program is free, there are no income eligibility requirements. ABE helps adults prepare for the GED exam, Vermont Adult Diploma Program, the driver's permit test, U.S. citizenship and the Commercial Driver's License (CDL). Since July 1996, ABE has served 7 Wallingford residents with over 500 hours of instruction.

9.7 Advanced Education

Degree granting institutions of higher education within the Rutland County Region include Castleton State College, the College of St. Joseph and Green Mountain College. Castleton State offers two and four year programs in the arts, sciences and humanities. The College of St. Joseph offers courses in education, business, arts and sciences. Green Mountain College offers two and four year degrees in business management, general sciences, retail management, leisure resource management and liberal arts, along with a Master's Program for a Sustainable MBA, a M.S. in Environmental Studies and a M.S. in Sustainable Food Systems

College level courses in various areas are also offered by the Community College of Vermont, CCVoffers associate degrees in liberal studies, business management, early childhood education and human services, including open enrollment opportunities, while St. Michaels offers local students the

opportunity to pursue Master of Science and Advanced Certificate programs in administration and management. University of Vermont courses held in Rutland complement the wide range of programs and degrees offered through UVM's main campus in Burlington.

10.0 Health And Human Services

A variety of health and human service facilities are available to residents. Some are located within the town; but many are provided by regional organizations. These include Rutland Area Visiting Nurses, Rutland Area Community Services (formerly Rutland Mental Health), Rutland Regional Medical Center, the Southwestern Vermont Area Agency on Aging, the Vermont Department of Health Services, the Lenny Burke Farm and Serenity House.

10.1 Rutland Regional Medical Center

The Rutland Regional Medical Center (RRMC) located in Rutland City provides acute medical care services to Wallingford residents. It is the second largest hospital in Vermont with 188 beds and over 100 attending physicians. Specialized services available to Wallingford residents at the Medical Center include emergency care, an out-patient/ambulatory care unit, a birthing center, a pediatrics unit, and a community cancer center which offers surgery, chemotherapy, and radiation treatments as well as cancer prevention program and patient/family support services. The Medical Center also provides an X-ray and diagnostic imaging unit able to provide mammograms, ultrasound scans and angiography as well as rehabilitation services to treat both patients and out-patients after an illness or injury.

In addition to these direct medical care services, the RRMC offers a wide range of other health-related community services to the residents of Wallingford including Alcoholics Anonymous meetings, a diabetes support group, a support group for the recently bereaved, a multiple sclerosis support group, and Overeaters Anonymous meetings. The RRMC also offers The HealthWise education program, a series of free or low-cost workshops, seminars, discussion groups and courses which cover a wide range of health-related topics.

10.2 Medical, Chiropractic and Dental Services

Medical, chiropractic, and dental services are provided by a variety of physicians, dentists, and chiropractors, most of which are located in Rutland City. As of 2012, Baasch Dental and the Thrive Center, medical practices, are located in the village area of Wallingford within historic buildings. The Thrive Center offers chiropractic care, therapeutic massage and nutritional counseling.

10.3 Rutland Area Visiting Nurse Association & Hospice (RAVNAH)

Rutland Area Visiting Nurse Association & Hospice is a non-profit voluntary organization certified as a Home Health Agency under the Medicare Program. The Nurse Association offers many types of services to Wallingford residents, including home nursing care for acute/chronic illness under the direction of a physician, physical therapy, speech therapy, elderly homemaker support, home health aid services, medical social services, and hospice services for the terminally ill and their families. These services are paid for by various sources, including Medicare, Medicaid, other types of health insurance, town funds voted annually, state grants, private contributions and the United Way.

The Association also offers occupational health services to businesses designed to improve employee health/safety practices such as screening for high blood pressure, diabetes, or cancer, health education courses, CPR training, and flu vaccination clinics. Costs for occupational health programs are based on staff travel and service time. Other community-based programs provided by the Visiting Nurses are publication of a newsletter, school nursing services, pre-natal classes and various clinics.

In 2011, RAVNAH provided 2,300 visits to 74 individuals.

10.4 Rutland Mental Health Services (RMHS)

Rutland Mental Health Services, Inc. (An affiliate of Community Care Network) provides behavioral health services such as:

- Access Center - the point of entry and referral for all children, family, mental health, substance abuse and developmental services.
- Evergreen Center which offers a spectrum of services such as alcohol and drug assessment and treatment, family recovery services, psychiatric evaluation and adult/child outpatient counseling.
- Emergency Services which provides immediate assistance in the event of a crisis.
- Carriage Club House which offers community rehabilitation treatment to the severe and persistently mentally ill.
- Children's Services including school-based programs, parent education and respite services.
- Rutland Mental Health Services also partners with RRMC in offering services such as medical detoxification and a crisis stabilization program at the Rutland Regional Medical Center.

10.5 Other Health and Human Services

The Lenny Burke Farm is a 7-acre residential health care facility for head-injured individuals. Established in 1987, it has offices in Rutland City. The original farmhouse at the Farm is 130 years old, but is in good condition. The facilities provide care for a maximum of 5 individuals.

Emma's Place, located on Main Street in the village, is a supervised residential apartment facility for residents with head injuries, providing three apartments for independent living, with monitoring and supervision of the residents provided by the staff of the Lenny Burke Farm.

Serenity House is located on Church Street in Wallingford. It provides a residential alcohol/drug dependency rehabilitation program for Vermont residents over the age of 18. Residency varies from 15 to a maximum of 24 individuals. The current building was acquired by Serenity House in 1972. It has 30 rooms, including beds, kitchen facilities, several bathrooms and office space. The facilities are maintained by an in-house custodial staff. Support equipment includes a van, computers, lawn care equipment, and a storage shed.

Maple Leaf Clinic, located on Main Street in the village, is a resource for pyschoeducation, comprehensive psychological and neuropsychological therapy, and language services. *Maple Leaf Center,* located in the same building, provides resources for non-verbal learning disabilities, Asperger's Syndrome, Turner Syndrome, pervasive developmental disorders, and social skill training.

10.6 Elder Services

Southwestern Vermont Area Agency on Aging (SVAAA) provides meals to senior citizens either on site or through the Meals on Wheels Program. A senior advocate program helps elders fill out application forms and works to resolve any problems related to receipt of benefit programs or other assistance. Guidance is also provided to persons having questions or problems related to health insurance claims or medical service payments. Advocates also help elders file Vermont tax rebate claims and provide assistance with program applications.

The Wallingford House, a historic building, on the corner of Main Street and School Street, offers Independent Living and Continuing Care for senior citizens.

Other services available to elders are:

- Long Term Care Ombudsman: This individual is available to provide assistance to residents of nursing and residential care homes in our region. The Ombudsman helps elders, or if appropriate, family members to understand information concerning financial assistance and other concerns related to long term care.
- Information and Referral: SVAAA maintains an up-to-date listing of programs and services available to elders. Older persons are able to get this information by either calling SVAAA or visiting the SVAAA office.
- Legal Service Attorney for Elders: Funding is provided by SVAAA to help pay for the services of an attorney whose role is to focus on legal issues of concern to older persons. This attorney works out of the Vermont Legal Aid Office in Rutland.
- Essential Transportation: Through SVAAA arrangements, a limited number of elders are provided with transportation to medical appointments or for essential shopping. Volunteer drivers receive reimbursement from SVAAA for mileage costs incurred in providing this transportation. SVAAA also provides a limited amount of funding to the One-2-One Program to help provide this important service.

Rutland Community Programs (an affiliate of Community Care Network) offers services to elders in the community, such as:

- RSVP (Retired Senior Volunteer Program) that offers an opportunity to use their skills and life experiences to serve their community through volunteering, from a few hours up to 20 hours a week.
- Green Mountain Foster Grandparent Program focuses on one to one continuing relationships between low-income seniors and special needs children and youth in schools, day care centers and other settings.
- One-To-One Program provides essential transportation, regular telephone contact and friendly home visiting to elders residing in Rutland County.
- InterAge is a unique Adult Day program offering social activities and respite care to elderly in Rutland County. A newly developed medical model also provides health services, allowing individuals with medical needs to participate in the program.

10.7 Vermont Department of Health

The Vermont Department of Health provides various services to Wallingford residents including the Women, Infants and Children (WIC) Nutrition Education Program, Child Development Clinics, Well Baby Clinics, Care for Pregnant Teens, Partners in Health, Special Needs Clinics and other programs, such as AIDS education seminars, epidemiology and communicable disease follow-up services, a staff sanitarian who inspects restaurants and food service outlets, and Sudden Infant Death Syndrome (SIDS) counseling/education for bereaved families and to local police officials.

11.0 Recreation

A wide range of recreational opportunities are provided throughout Wallingford for both residents and visitors alike. These opportunities are provided by local authorities and organizations, as well as by the state and federal government. Recreational resources include a Town Recreation Park, the Long Trail/Appalachian Trail, the Green Mountain National Forest and Otter Creek. Recreational trails are shown on Map 10. Elfin Lake, Stone Meadow,

11.1 Wallingford Parks

The Wallingford Park Association was a private, non-profit corporation operated by volunteers to oversee land donated to and acquired by the Park Association since 1919. The land, now maintained by the Town, runs on both sides of Otter Creek and along Elfin Lake.

The Town operates the Elfin Lake beach, staffed with lifeguards, and offers recreational programs for children. A beautiful historic footbridge over Otter Creek connects the existing playing fields with Stone Meadow and Elfin Lake.

11.2 Town Recreation Field

The Town Recreation Field includes 3 ball fields, a playground, a basketball court and a tennis court on 6 plus acres on Meadow Street. The Recreation Field property was acquired in 1974, with improved facilities developed in 1976 and 1989. Recreation programs are operated throughout the summer.

Activities at the Recreation Field are overseen by a seven member Recreation Board appointed by the Selectboard. According to the bylaws of the Recreation Board, two of the seven members must be members of the Board of the Wallingford Recreation Association.

Use of the recreation field is open to everyone free of charge. Activities enjoyed at the facilities on a regular basis include softball, baseball, soccer and tennis. Access is available from sunrise to sunset, from Monday through Sunday. Although no specific counts are recorded, the level of use of the facility is high and appears to be increasing.

The Summer Recreation Program is very successful. It serves children up through grade 6, including Wallingford residents, residents of neighboring towns, and summer visitors.

The condition of the recreation field is currently considered to be good, although in the future there will be a need for more intensive management and some increase in funding.

Funding for the Recreation Field is raised through the property tax as part of the Town's general municipal budget, and through special state and federal grants. For example, the improvements made to the park in 1989 were made possible by a $70,000 grant from the federal Land and Water Conservation Fund. A small scale concession has also been resumed to supplement local and federal funding sources.

11.3 Green Mountain National Forest, Long Trail, Appalachian Trail

The Green Mountain National Forest (GMNF) is a large federal land holding maintained to provide benefits - including recreational benefits - that privately owned land does not. With its large tracts of

land in remote areas, the National Forest offers many opportunities to the public for back country recreation and wilderness. Along with this emphasis on outdoor recreation, the GMNF works to protect and enhance forest scenery and habitat for fish and wildlife.

The GMNF is managed by the U.S. Forest Service according to the principles of multiple use, meaning that the range of opportunities available within the forest are tailored to meet the needs of a wide variety of users. The application of these multiple use principles is spelled out in the GMNF Ten Year Plan, which was prepared with extensive public involvement by the diverse groups of people using the forest.

Funding for the GMNF comes from the federal government. As a division of the U.S. Department of Agriculture, the Forest Service receives appropriations from Congress. It also generates revenue from timber sales, from leases and from user fees.

Of the 340,000 acres within the GMNF, 7,500 are within Wallingford. Important GMNF recreation features within or partially within Wallingford include White Rocks National Recreational Area, which contains White Rocks Picnic Area, the White Rocks Cliffs and Ice Beds, and the Greenwall Shelter. The White Rocks National Recreational Area was established by federal law for the purpose of preserving and protecting "existing and wild values and to promote wild forest and aquatic habitat for wildlife, watershed protection, opportunities for primitive and semi-primitive recreation and scenic, ecological, and scientific values."

The White Rocks picnic area takes up 10 acres near Route 140 and dates to the 1930's. It receives heavy use in the summer, being used by an average of 40 to 60 people per day. The White Rocks Cliffs and Ice Beds are unique geological features with important wildlife and natural area values. The Greenwall Shelter is a shelter along the Long and Appalachian Trails.

The Appalachian Trail (including the Wallingford segment of the Vermont Long Trail, often called the AT/LT), which stretches from Georgia to Maine, is a significant recreational resource in its own right. The National Park Service, a branch of the U.S. Department of the Interior, helps manage the trail in partnership with the Forest Service, the State of Vermont and the Appalachian Trail Conference. Approximately 10 miles of the Trail are located in Wallingford, stretching along the Green Mountains from Mount Tabor to Shrewsbury. Based on available data, an estimated 25,000 to 30,000 people hike at least a portion of the Appalachian Trail within Vermont annually. The section of the Trail running through the Rutland Region is one of the most heavily used, in part because its proximity to Routes 4 and 7 permits easy access by casual day hikers and serious long distance hikers alike. AT/LT Hikers often visit Wallingford's area businesses for food, supply, and other amenities.

Other important recreational trails in town include the network maintained by the Vermont Association of Snow Travelers. (VAST)

11.4 Otter Creek

As a recreation resource, Otter Creek offers a range of opportunities, from fishing to boating. According to The Vermont Rivers Study, fish species found in Otter Creek include brown, brook and rainbow trout, northern pike and small mouth bass.

The experience offered by Otter Creek is characterized by an extended season and easy access to flatwater, quickwater and easy rapids.

Management responsibilities for Otter Creek are shared by the Vermont Departments of Fish and Wildlife (DFW), and of Environmental Conservation (DEC). DFW issues hunting, fishing and trapping licenses, enforces state fish and wildlife laws and sponsors and manages projects to prevent poaching. DEC monitors water quality, regulates stream alterations and stream flow, and is involved in other water quality related activities. Both agencies conduct research, and work to improve fisheries habitat, and both can acquire land and water resources for water quality and habitat protection and improvement. In 1990, DFW spent $337,000 to acquire land on Otter Creek.

12.0 Natural And Cultural Environment

Major natural resources in the town include its agricultural and forestlands, mineral resources, wildlife habitat, lakes and ponds, rivers and streams, and recreation areas. Many of these resources contribute directly to local economic activities, such as farming and forestry, by providing critical business 'inputs'. Others contribute indirectly, for example by attracting travelers and tourists who purchase goods and services in the town. By making Wallingford a desirable place to live, these resources also contribute to the town's high quality of life. Significant natural areas, as identified by the State, are shown on Map 4A.

Lands within Wallingford with high potential for agricultural production are focused in the Vermont Valley, as well as in selected areas in the northeast corner of town. Meanwhile, lands with high potential for forestry production follow the same general pattern as agricultural soils but are more widespread.

Mineral resources, including sand and gravel, are scattered in parts of the Vermont Valley. They are also found in distinct veins or arms in the vicinity of Route 140 and the western slope of the Green Mountains.

Wildlife potential is high throughout much of Wallingford, as is 'unimproved' recreation potential, although each tends to be greatest in areas dominated by water or forests. In 2008, the Staying Connected Initiative used GIS modeling to predict areas most important for maintaining and enhancing habitat connectivity for Wide Ranging Mammals (WRM) between the Green Mountains and Adirondacks. Habitats in these areas are components of a linked network of vital wildlife-sustaining habitat, providing the opportunity for the movement, migration, and dispersal of WRM between the Green and Adirondack Mountains. The integrity of this network is crucial for healthy and resilient WRM populations. Maps from the 2008 study can be viewed in the Wallingford Town Office.

Important surface water resources (lakes, ponds, rivers and streams) include Otter Creek, Elfin Lake, Roaring Brook, Homer Stone Brook and Wallingford Pond. Groundwater resources include the aquifers for the town's water systems, and their 'source protection areas'. (Map 4B)

Major cultural resources include the large number of historic buildings, the historic village centers, institutions such as churches, the Historical Society, and the Grange, as well as the town's overall landscape. Wallingford is home to 176 buildings on the National Register of Historic Places and 50 buildings on the State Register of Historic Places. Furthermore, the town was the first in the state with an officially recognized Rural Resource Area extending on both sides of Route 7 generally from the Twin Bridges to South Wallingford. Like natural resources, cultural resources also contribute positively to the local economy and the quality of life.

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.

- Identify the capabilities, strengths and opportunities that exist in Wallingford and undertake formal regional economic development planning initiatives that reflect the needs and opportunities identified by the businesses in Wallingford.
- Develop strong public/private partnerships, and public sector programs designed to support and facilitate economic activity in town.
- Develop a long term economic development plan and strategy to encourage and facilitate sustainable, environmentally sound commercial and industrial development in the town and in the Rutland Region, to provide jobs and income for our citizens.
- Evaluate, identify and support, by appropriate designation and regulation, areas of the town that, by virtue of their historical and existing patterns of land use, physical characteristics and access to necessary and appropriate infrastructure, are suitable for sustainable, environmentally sound commercial and industrial development.
- Assess whether there are barriers to increasing capacity of childcare facilities in town zoning regulations.
- Encourage the availability of locally grown foods.

13.4 Education

When planning for public facilities, it is important to bear in mind that, in addition to educating and teaching social skills to the community's children, schools also serve as centers of community identity. Schools are increasingly used by communities for meeting and recreation spaces. As adult education, technical and job training and 'life long learning' become the rule rather than the exception, non-traditional educational opportunities--some in schools, some not--will take on greater importance. Wallingford's educational facilities are generally adequate. However, aging facilities, such as the Wallingford Elementary School, and the fluctuations in school populations will require planning and implementation strategies that anticipate and answer the needs generated as a natural consequence of growth and development in the town. The Town has a responsibility to plan for and address the predictable impacts of change, growth and development on its educational facilities.

Goals

- Provide educational programs and facilities that enable every Wallingford resident, present and future, to become a competent, self-assured, caring, productive, responsible individual and citizen, committed to continued learning throughout life and prepared for a world of rapid change and unforeseen demands.
- Create a safe, secure learning environment where quality educational opportunities are provided to all of our citizens.
- Create and maintain a vibrant, active and appropriate center for educating our citizens and supporting community activities.

Policies and Implementation Strategies

- Provide sufficient and appropriate physical space to meet current and projected educational needs.
- Continue to operate the school facilities so that they may provide a wide variety of community services including but not limited to: education of children and adults, preschool and senior citizen programs, recreation, and meeting and library facilities.
- Develop and implement capital plans and programs for educational facilities, so that existing educational facilities are utilized, and future educational facilities are developed. 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 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.

- Encourage new development near streams to be designed and sited to blend with the natural surrounding as much as reasonably possible, and to avoid unreasonable interference with recreational uses, scenery or ecological functions of the stream corridor.
- Ensure that adequate erosion control measures are taken in areas of high erosion potential (e.g. steep slopes and thin soils) and high susceptibility to surface water pollution (e.g. along wetlands, streams and ponds).
- Establish and implement voluntary programs for stream conservation and water quality protection.
- Establish reasonable, site-specific stream buffers that conserve water quality, natural habitats, wildlife movement, and other ecological processes along aesthetically and recreationally important sections of streams.
- Incorporate into zoning regulations measures to address sediment and storm water runoff during and after construction.

Scenic and Aesthetic Qualities

Goals

- Encourage and create incentives for the protection and enhancement of the natural beauty and scenic characteristics of significance to local landscapes, including landscape diversity, order and harmony of landscape elements, unique combinations of natural and cultural features, distinctive distant views, foregrounds in harmony with distinctive distant views, skylines, shorelines, steep slopes, agricultural and forest lands, traditional villages and streetscapes, historic buildings and cultural features, and significant scenic roads and pathways.
- Encourage and provide incentives for residential, industrial and commercial development to avoid undue adverse impact on significant natural areas to the greatest extent possible.

Policies and Implementation Strategies

- Establish a process for conceptual review of proposed large scale developments in order to influence project design to protect scenic resources and natural areas.
- Encourage the preservation of significant scenic and aesthetic values and qualities through regulatory provisions that create benefits for property owners who protect and preserve such values and qualities.
- Incorporate into local land use laws and regulations incentives to encourage landowners to avoid undue adverse impact on natural areas and historic and scenic resources that are designated as significant.
- Investigate and evaluate the availability of a natural area Transfer of Development rights program to protect important natural areas and historic and scenic resources while, at the same time, respecting the economic interests of property owners.

Historic Features

Goals

- Recognize the role played by the historic quality and character of Wallingford in creating the town's identity, character and sense of community.
- Respect the fact that, by and large, our historic resources are privately owned properties, and that the cost of preservation of those resources is borne not by the public that seeks to benefit from it, but by the property owner.

- Recognize and respect the role of individual initiative, judgment and self-determination, and sense of community (as opposed to formal planning and regulation) in developing the history and character of Wallingford.
- Insure that economically viable uses can be made of privately owned historic properties, and that historic designations do not result in the imposition of unreasonable economic burdens or excess regulation on affected property owners.

Policies and Implementation Strategies

- Study, inventory and catalog Wallingford's historic resources, particularly historic homes and buildings.
- Promote greater awareness of the role and importance of historic resources.
- Promote and develop the commercial potential of the town's historic resources.
- Plan and develop public infrastructure (e.g. parking areas, pedestrian walkways, landscaping enhancements) that support and promote the public and private historic resources of the town.
- With the advice and consent of the affected property owners, designate appropriate Historic Districts within the town.
- Develop public policies and programs that encourage, facilitate, create incentives for, and support historic preservation and adaptive reuse of historic properties.
- Develop land use regulations that encourage the preservation of historic resources, particularly in the Village Historic District, while at the same time respecting the rights of the owners of properties designated as historic resources to make reasonable use of their properties.
- Participate in Act 250 hearings to assist in balancing the public interest in historic preservation against the rights of property owners to make reasonable use of their properties when applicable

Water and Air Quality, Wildlife and Land Resources

Water Quality

Goals

- Maintain high quality groundwater and sufficient yields to adequately serve current and future residents of Wallingford.
- Protect groundwater recharge areas.

Policies and Implementation Strategies

- Require proper installation and maintenance of septic systems.
- Provide information and incentives to encourage local farmers to use the best management practices (BMPs) reasonably available.
- Provide forest landowners with information and incentives to protect water quality. (Acceptable Management Practices)
- Ensure that new development and land use activities do not create undue adverse impacts on groundwater quality, or exceed the capacity to supply reasonably adequate groundwater yields to existing residences and businesses.
- 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.
- Create a program to encourage cooperation among adjacent landowners to protect and improve important habitats and corridors.

13.7 Site Conditions and Limitations for Development

The objective in planning to conserve our natural resources is not to prevent growth, development or change, but to help guide growth and development in ways that will allow reasonable land uses, while, at the same time, allowing the public to continue to enjoy our valuable natural resources. To the extent that impacts of development are demonstrated to have a direct and adverse effect on the health and safety of the public, they can and should be subject to reasonable regulation. Where, however, the perceived impacts are more subjective, (e.g. aesthetic impacts), care must be taken to avoid imposing our personal biases and subjective values in the guise of land use regulations.

There is also no doubt that the conditions and characteristics of individual properties (e.g. slopes and soil conditions) present opportunities and limitations for land use and development. It must be recognized however, that this Plan and the Plan Maps generalize about the physical characteristics and limitations of properties throughout the town, and property owners who seek to develop their properties should be afforded the opportunity to demonstrate, through site-specific information and development planning, the extent to which such limitations affect their property, and measures that they propose to take to overcome such limitations.

Slopes

Development Limitations

Improper development in areas with excessive slopes can cause damage to the natural environment in the form of soil erosion, stream siltation and contamination of groundwater. Excessive slopes present difficult conditions for construction of roadways and homes. Removal of vegetation and grading of these slopes for foundations and driveways can cause severe problems if site grading and erosion controls are not properly designed and constructed. As root systems and subsurface soil are exposed, the erosive force of rainfall and surface runoff increases. With this may come siltation of streams and rivers that may result in high acidity or nutrient levels and adverse impact on fish habitats. Additionally, soil erosion may cause increased flood stage levels, clog drainage ways and diminish the physical life of reservoirs. Soils on many of the most severe slopes are shallow to bedrock and restoration of vegetative cover is difficult, especially at high elevations.

Sewage System Limitations

The regulations affecting onsite wastewater systems adopted in 2002 have taken into account changes in sewage treatment technology. While steep slopes still limit development, many 20% slopes are now considered suitable for various types of septic systems, depending on the level of permeability. With the new changes, even some slopes over 20% are considered moderately well suited, when the permeability of the soil is moderate to slow. Slopes greater than 20% that also have a limited depth to bedrock or are excessively wet are still considered unsuitable for traditional and mound sewage systems.

Financial Implications of Development on Steep Slopes

Development in areas with excessively steep slopes may also have hidden financial burdens for the Town. New roads on slopes exceeding 10 percent may be costly to construct and maintain. Narrow, winding mountain roads may be hazardous and may be difficult to plow in winter. In addition, access by fire, emergency medical, law enforcement and service vehicles is more difficult in areas of steep slopes, 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.
    - Woodlot owners should be encouraged to manage their woodlots for multiple uses which would include sustained yield of timber and fuel wood.

Policies and Implementation Strategies

- Encourage and create incentives for development and settlement patterns that reduce travel requirements for work, services, shopping and recreation.
- Encourage clustered and multi-family housing in new residential developments.
- Allow neighborhood service and retail stores and other businesses serving local needs in village areas.
- Allow in-filling in locations where higher density development is desirable and appropriate.
- Provide opportunities for appropriate home occupations, and establishment of businesses and employment opportunities in proximity to existing village centers.
- Establish economic development growth centers and designate commercial and light industrial areas in reasonably close proximity to existing village centers to minimize, as much as possible, transportation needs and associated energy costs.
- Establish a strong and viable commitment to energy efficiency in all public buildings.
- Promote energy efficiency and increased use of renewable fuels in all buildings, especially new ones.
- Create incentives for energy efficiency in proposed developments, including the energy efficiency of the building envelope, site design and their scale, location and configuration.
- Encourage use of efficient lighting techniques that reduce both energy consumption and pollution of the nighttime sky.
- Create opportunities for walking, cycling and other energy efficient, non-motorized alternatives to the automobile.
- Evaluate and support state and regional public transportation programs serving Wallingford.
- Enact regulations that provide positive incentives for energy conservation and concentrate development in appropriate locations (e.g. grant density bonuses to developments employing advanced solar design and energy efficiency).
- Educate citizens about the need for sustainable energy practices.

13.9 Recreational Opportunities

Outdoor recreation has a significant role in Wallingford. Most residents place a high value on the availability and quality of outdoor recreation in the town and take part in various activities throughout the year. Seasonal activities include fishing in Otter Creek, swimming in Elfin Lake, ball games at playing fields in Wallingford village, hiking on the Long Trail and Appalachian Trail, hunting for deer, bear and small game, picnics and hiking at White Rocks National Recreation Area, horseback riding, snowmobiling in the Green Mountain National Forest and on Vermont Association of Snowtravelers (VAST) trails and cross-country skiing in the Green Mountain National Forest and on the Catamount Trail.

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 (e.g. schools, parks, churches), and important recreation sites (e.g. lakes, ponds, streams, vistas, woods).
- Encourage the facilitation of recreational opportunities in connection with land uses and development, provided that such recreational uses and facilities are consistent with the reasonable use and development of the land and the rights of the property owner.

- Maintain and expand the trail systems, including the Appalachian and Long Trail systems, while at the same time, respecting the rights of the property owners whose property is traversed by the trail systems.

Policies and Implementation Strategies

- Create incentives for the preservation, donation or dedication of public and private recreational facilities in connection with major land uses, subdivisions and developments.
- Incorporate into Town highway standards provisions for creating and maintaining shoulders suitable for use by bicycles and pedestrians on all paved roads that are part of the community trail system.
- Preserve Class 4 roads for recreational use or downgrade their status to 'trails' (19 VSA Section 535).
- Develop programs to establish and maintain community forests, parks and recreation areas.
- Evaluate and prioritize lands for public investment, and implement capital planning and programming to enable the purchase of land or rights to land for public recreation.
- Adopt and add lands desired for public parks or recreation areas to an Official Town Map, as provided in 24 VSA Sections 4422-4425, 4469.
- Map existing and desired trails, greenways and public access points and set management objectives for each trail or greenway section, and develop a program to establish and maintain a community trails and greenway system.
- Identify, provide and protect public access to community parks, rivers, trails, forest lands and other areas providing outdoor recreation opportunities.
- The Town should play an active role in Act 250 hearings in balancing the desire to protect land which has significant recreational potential against the rights and interests of the landowner.

13.10 Agricultural and Forest Industries

While land use regulations speak of agricultural lands as a 'resource', it must be remembered that the lands upon which the resource exists do not belong to the public, but are owned by private individuals whose rights and interests must be considered in any land use regulations and decision making which affects their land. Most of us see agricultural lands and uses as a 'backdrop' to our lives and our quality of life. However, few of us have to bear the burden of owning, maintaining and supporting those agricultural lands and uses. As we consider public goals and policies for preserving 'our' agricultural resources, we must be careful not to disadvantage and disenfranchise those who own and have owned (and paid) for those agricultural resources.

Goals

- Respect and protect the rights and economic interest of the owners of agricultural lands in any planning or regulatory program that seeks to protect and preserve agricultural lands.
- Where possible, and consistent with the rights and interests of property owners, agricultural lands should be protected and preserved.

Policies and Implementation Strategies

- In the event that a seller seeks Town approval of a sale of land to the federal government, the Town should seek to achieve the greatest possible level of mitigation of the property tax consequences that can be reasonably achieved. This policy shall not apply to non-profits such as land trusts.

- A Land Evaluation and Site Assessment (LESA) or Forest Land Evaluation and Site Assessment (FLESA) study should be considered as part of local zoning to identify and prioritize agricultural lands.
- Agricultural and forestry soils should be identified and evaluated, where possible, based on site-specific soil evaluations and actual agricultural or forestry function, and important agricultural and forest soils should be identified and conserved consistent with the rights of the owner of those lands and the interests of the citizens of Wallingford.
- Local zoning requirements should be revised to create incentives for landowners to conserve valuable agricultural and forest lands, while at the same time respecting the rights of landowners to make reasonable uses of their land.
- Where it is evident from the physical characteristics (e.g. size, location, accessibility, proximity to incompatible or competing land development) of the property identified as containing agricultural or forestry soils that it would be unlikely or impractical to continue the use of the property for agricultural or forestry uses, the property owner should not be required to keep the property in agricultural or forestry use, but may use, develop, or sell the property for such other uses as may be permitted in the district in which the property is located.
- The viability of an agricultural and forestry land Transfer of Development Rights program should be studied.

13.11 Natural (Earth) Resources

Earth resources, such as sand, gravel, crushed stone, aggregate, calcium carbonate, dimensional, structural or architectural stone products are not only of value to the owner of the property on or under which such resources are located, but provide a direct and indirect source of employment and, in the case of sand, gravel, crushed stone and aggregate, provide materials that are essential to construction of homes and businesses and maintenance of roads. Although the extraction, processing and transportation of the earth and mineral resources that are located in Wallingford may create adverse and undesirable impacts on neighboring and surrounding land uses, such impacts, in and of themselves, may not be sufficiently adverse to warrant the prevention or prohibition of such extraction and processing. With appropriate consideration for surrounding land uses and proper mitigation measures, extraction of earth resources may be permitted on appropriately located sites in the town.

Goals

- Identify important sand, gravel and mineral resources.
- Identify and balance the benefits and uses of sand, gravel and other mineral and earth resources against the impacts associated with the extraction, processing and transportation of such resources.
- Develop municipal land use regulations and other ordinances that address and mitigate the impacts of extraction, processing and transportation of sand, gravel and other mineral and earth resources.
- Ensure that all discontinued or abandoned sand or gravel pits are reclaimed in accordance with applicable State standards for re-vegetating sand and gravel pits.

Policies and Implementation Strategies

- Provide reasonable opportunities for development and processing of sand, gravel and other mineral and earth resources.
- Discourage the location of development that is potentially incompatible with sand, gravel and mineral extraction in areas with significant sand, gravel or mineral resource potential or, if that is not

reasonably achievable, plan and design such development in a manner that will not preclude the extraction of such sand, gravel or mineral extraction.

- Incorporate operating and site restoration performance standards that mitigate adverse impacts of sand, gravel and mineral operations into local zoning regulations.

13.12 Housing

Wallingford's mix of rural and village housing opportunities, available public services and facilities, and quality of life have made and will continue to make Wallingford one of the most attractive residential communities in the Rutland Region. Housing needs in Wallingford will be driven by a combination of factors, including the aging of the existing housing stock, in-migration of people who find employment and economic opportunity in the Rutland Region, and out-migration from the areas around the City of Rutland as those areas become more urbanized.

Goals

- Facilitate the development of housing that meets the current and future needs of diverse social and economic groups.
- Residents have an adequate supply of safe, healthy, attractive and affordable housing.
- Housing is available in a variety of types that meet the needs of diverse social and income groups and is located conveniently to employment, services, retail centers, and educational and recreational facilities.
- Evaluate, understand and incorporate into planning and regulation of housing the relationships between costs and benefits of both public and private infrastructure as a function of the cost and availability of housing, particularly affordable housing.

Policies and Implementation Strategies

- Encourage housing developments that are affordable and efficient, and serve a mix of upper, moderate and low-income households.
- Encourage the provision of affordable housing for special needs populations such as the physically handicapped, mentally disabled, single parent households, elderly and the homeless, and seek to fully integrate such housing into the community.
- Provide for multi-family, single family, conventional and manufactured housing.
- Adopt zoning regulations that recognize wise utilization of public and private resources, and affordable housing, may require regulatory provisions that permit smaller lots in the village areas, allow development in rural areas that are not dependent on public infrastructure such as municipal water and sewer facilities, provide for multi-family dwellings, accessory apartments, clustered developments served by common facilities, innovations in design and flexibility in local regulations, creation of new lots to 'infill' existing village areas, mobile home parks and other ways to encourage affordable housing.
- Participate in studies to assess the Region's total housing needs and determinations of each town's fair share of the total regional need for all types of housing, including affordable housing.
- Develop and implement capital plans and programs for public infrastructure, so that existing housing resources are utilized, and future housing resources can be 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 the timing and rate of new housing construction does not unduly burden the Town's ability to provide adequate public infrastructure, facilities and services that will be necessary to serve future housing needs.
- Seek support and cooperation of area businesses and organizations, in the analysis of the affordable housing problem and implementation of solutions.

14.0 Future Land Use

The Plan emphasizes existing development patterns, and strongly supports continuation of those patterns (Map 11).

14.1 Village Regions

Historic Wallingford Village
This is the area of traditional, historic village development. This region begins at the south end of the current village zoning areas and extends north to the existing north edge of current village zoning districts. It extends west to Otter Creek and east to roughly the 210-meter contour line on the USGS map. In this region, which is served by municipal water and sewer, densities and uses traditional within the village will be continued, and new development will be encouraged to follow those historic patterns. The traditional mix of uses includes single, two-family and multi-family residential, retail, service/professional, lodging, restaurants, public uses, schools, libraries, churches, service clubs, gasoline stations and other similar uses. Because of the historic nature of the village, and its designation as an historic district, it is important that care be taken to preserve and enhance the historic character of the village. Development should be at a village scale, including building size and lot coverage. Also working counter to preservation of village scale and character is the increasing traffic on Route 7. The Town will continue to insist that any improvements to Route 7 in the village include speed control, traffic calming, sidewalks and pedestrian walkways, amenities in scale and aesthetic character with the village, retention of existing street trees, and addition of new plantings according to an approved street tree plan.

South Wallingford Historic Village Region
This region includes the area of historic village settlement in South Wallingford. This region begins in the south at the corner on Route 7 just north of the limestone quarry and continues north on Route 7 to the corner just north of the Grange Hall. It extends west to roughly the 198-meter contour line and east across Otter Creek and the railroad to roughly the 198-meter contour line. This region has a community water system, but does not have a municipal or community sewage disposal facility. Densities will be determined by site suitability for on-site sewage disposal. Uses should continue to be those traditionally occurring within the village, including single and two-family residential, retail and service businesses, lodging, restaurant, public uses, service organizations, churches and other similar uses. All development should be in scale with existing development both in size of structure, and in lot coverage. As in Wallingford Village, Route 7 works counter to preservation of village character. This is further intensified by the hazardous intersection with Hartsboro Road that occurs in the village. The Town will continue to insist that any improvements to Route 7 in South Wallingford are at residential scale, and that improvements include sidewalks/pedestrian walkways, traffic calming measures and speed control.

East Wallingford Historic Village Region
Unlike the other historic villages, East Wallingford is first viewed entering from the west from a considerable elevation, giving the traveler a ‘bird’s eye view’. This village is also the site of historic village development, but has neither municipal water nor sewer. Therefore, densities will be determined by the capability of a site for onsite sewage treatment and location of adequate, pure domestic water. Traditional uses in the village are single and two-family residential, retail and service/professional businesses, public uses, churches, service clubs, and in the northwest quadrant, a dairy production

business and a trucking business. The village is traversed by Route 140, however, the geometrics of that road within the village provide their own 'traffic calming.' There are also no current plans by the State to reconstruct Route 140 in the village. If such improvements were to be planned, the same concerns discussed in the other villages would apply in East Wallingford as well.

14.2 Gateway Regions (designed to overlay underlying land use designations)

Wallingford Village

At each end of the Village District are stretches of Route 7, which serve as 'gateways' to the village.. Ways that are traditionally used to enhance entrances to villages are to extend street trees through the gateway area, locate attractive signage announcing the village, extending the village scale and design of street lighting through the gateway areas, providing vistas of the village if possible (such as strategic clearing with the permission of the property owner to feature a church spire or other prominent feature), narrowing the pavement, and perhaps having gravel pedestrian paths, etc. The Gateway Overlay Regions are those areas, on the south from the south end of the Twin Bridges to the Village District, and on the north, from the Village District north to the beginning of the divided highway.

While it might be appropriate to have gateways in South Wallingford, it seems to be unnecessary, especially if the Route 7 improvements contain adequate traffic calming measures. One of the approaches to East Wallingford from Route 103 near Route 155 is in Mt. Holly, giving Wallingford little control over development here. (This is a prime example where the two towns could work together on compatible plans for this area.) The north entrance is within Wallingford, and should be developed in a way that slows speeds, and makes the entrance into Wallingford pleasant and inviting.

Wallingford Village Expansion Areas

These areas are located adjacent to the historic village area, and are capable of being served by future extension of municipal water and sewer. Extensions that are requested which do not meet the planned schedule of service extensions will be funded by the developer. An assessment system can be created to provide a payback to the developer as other lands along the line(s) develop. Lot sizes will be similar to those in the village, because of the availability of services, but the historic design criteria that apply in the village will not be applicable in these areas. Allowed uses would be single family, two-family and multi-family dwellings, home occupations, professional office, bed and breakfast establishments, public uses and community uses such as churches, fraternal organizations and similar residential scale community uses.

Public Lands

The Public Lands Region includes all publicly owned lands: federal, state and local. The federal lands are primarily the Green Mountain National Forest (GMNF), but also include an area along the Appalachian Trail, which is not included within the GMNF. State lands would include any fishing access areas, picnic areas, trails, highway department sheds, etc. Local lands would include school, Town office, public park land, water and sewer district facilities and other municipally owned lands. Development on municipal lands must meet local regulations. Development on state lands is required to be consistent with regionally approved municipal plans. Development on federal lands does not usually require local permits, since federal authority supercedes local regulation. However, any actions conducted by the GMNF undergo extensive public review, as required by the National Environmental Policy Act (NEPA). This NEPA review invites public comment from town officials and private citizens

alike, and includes opportunities for collaboration between the Town and the GMNF in developming project plans.

14.3 Floodplain Region

The Floodplain District includes all lands shown on the Federal Flood Insurance Maps within the 100 year floodplain. Development is prohibited within the floodway (the channel or area of moving water during the 100-year flood). Development may be permitted within the floodway fringe (the area of water ponding or storage during a 100-year flood) provided that the Town has adopted floodplain regulations that are consistent with federal guidelines.

14.4 Rural Settlement Areas

There are several areas within the town that have a pattern of scattered rural development. These are generally served by Class 2 or 3 Town roads, and are areas that are generally suitable for onsite sewage disposal.

Hartsboro Road

Hartsboro Road is a Class 3 Town road connecting to Route 7 at two points. While generally avoiding areas of steep slopes, soils along Hartsboro Road are good for septic systems.

Route 140 West

The area north of Route 140 immediately west of the village, and then further west on Route 140 nearer the Tinmouth border are areas with generally good soils for septic systems with access via Route 140, a State paved collector highway. These areas generally are not steeply sloped, and are in close proximity to Wallingford Village.

Route 140 and East Street (TH 15)

This area is generally an area of sandy and gravelly soils with very good potential for onsite sewage disposal. East Street connects north into Clarendon, and accesses Route 7 via Haven Hill Road. This area also accesses to Route 140, a paved State collector highway with easy access to Wallingford Village. This area has generally better soils than the Route 140 west area described above.

Church Street

This area has generally good soils for onsite disposal except for a section directly across Route 140 from the East Street area. Access is either via Church Street, a Class 3 Town road or Route 140, a paved State collector highway. The area is in close proximity to Wallingford village.

East Wallingford, Beginning in the Village and Traveling North along Parker Road and Hateful Hill Road

The east side of Parker Road, and the area at the end of Hateful Hill Road both have areas of generally suitable soils for onsite sewage disposal.

14.5 Special Regions

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. The Plan reflects Heavy Industrial designation only on the areas that are active, or expected to be active, within the five year period of the Town Plan. When another sector is opened, the applicant would be required to have a hearing on a site plan to determine if the prior sector was reclaimed, and what the impacts of the new sector would be on adjacent landowners and on transportation facilities.

14.6 Agriculture, Forest, and Low Density Residential

The remaining areas of the town all of which generally have soils with low septic suitability, steep slopes or poor access to roads will be designated AF/LDR. Single family and two family housing would be permitted uses together with accessory uses and home occupations. Agriculture and forestry would be allowed, exempt from most developmental restrictions. All other uses (which would be low intensity uses suitable for a low-density residential district) would be conditional. Planned Residential Development would be encouraged where soils are suitable, to encourage preservation of farm fields, viable forestry operations, or natural areas, and to avoid areas with steep slopes, wetlands or poor roads.