CHAPTER VIII
LAND USE

A. INTRODUCTION

As described in Chapter III, natural features of the land provide the basis for physical planning. In this chapter, land use -- the ways in which people settle on, use and shape the land -- is described and analyzed. To a great extent, land use is the core of local planning, and therefore, the subject is central to the Master Plan. The location, size and viability of farms, residences, businesses and industries, and their relationship to each other directly affects future development potential, property values, the tax base and the character of the community. Likewise, the relationship and proximity of existing land uses to community facilities influences the ability of the Town to provide efficient and effective public services.

The type and intensity of land use in Litchfield and the Nashua Region changed dramatically over the last 50 years, as evidenced by large residential population gains and consistent regional economic expansion. Growth is expected to continue in Litchfield, although probably slower than in the late 1970s. If the past is a guide, the highest demand for new development will be in the residential sector, although there is extensive land available in commercial and industrial zoning districts. The Manchester Airport Access Road is likely to begin by 2004 and the long planned Circumferential Highway is in the State Ten Year Plan for 2009. These two projects will likely put significant pressure on the northern and southern commercial districts and jeopardize the farmland within those districts.

This chapter describes land use patterns in Litchfield and analyzes current standards in the zoning ordinance, subdivision and site plan review regulations. Build-out projections are summarized to examine what future development may occur based on current zoning and available land. The chapter concludes with discussion of the potential for improving zoning to promote development that is consistent with the master plan goals.

B. HISTORICAL DEVELOPMENT

Contemporary land use in Litchfield evolved out of the division of the community into land grants in the 18th century. Historical influences on land use are: the Merrimack River and the excellent farming soils in and around River floodplains, the evolution of Route 3A out of horse and carriage paths, and the proximity of Litchfield to Nashua and Manchester. It was a 1700s act by the King of England that divided Litchfield into narrow parcels that extended west to east encompassing river frontage, farmland and forests. Although sometimes difficult to identify among the more recent cookie-cutter one-acre subdivisions, many original lot lines are still evident in the parcel configurations in today's tax map.

Prior to the 1960's, the development pattern reflected the Town's north-south linear shape, with most farming, residences and community institutions concentrated along the Merrimack River and NH

Route 3-A, on the Town's western edge. Since Litchfield developed in a low-density linear fashion around farms, a distinctive village or town center with dense patterns of mixed-use development did not emerge. A new Town Hall and police station were completed in 1997 at the intersection of Liberty Way and Hillcrest Road. While no approved plan is pending, the concept of a town center in this location remains a possibility. There is adequate Town owned land to build additional facilities in this area, on the highway department and Town incinerator land nearby.

In the 1970's residential growth occurred at the Town's north and south ends as suburban extensions of Nashua and Manchester, the two largest cities in the State. Since then residential growth has occurred in central Litchfield off of Talent Road, Pinecrest Road and, more recently, off Hillcrest Road and Albuquerque Avenue. Rather than clogging the Town's only north-south arterial, NH #3A, in the 1970s the Town actively initiated steps to direct growth away from 3A, and prime farmland, through the establishment of Albuquerque Avenue. The approach was to direct residential development towards the interior of the community where there are fewer high quality agricultural soils and where the sandy soils are complementary to community development without sewers. The development of the road also provides the community with a second north/south arterial. While there is currently a section of Albuquerque Avenue between NH 3A and Colby Brook being completed, the bridge crossing remains unfinished. Completion of the Colby Book bridge finishes the northern Albuquerque Avenue segment. Albuquerque Avenue also has incomplete segments center, between Hillcrest Road and Meadowbrook Lane, and to the south from Chase Brook to its end at NH 3A.

Map VIII-1: Existing Land Use

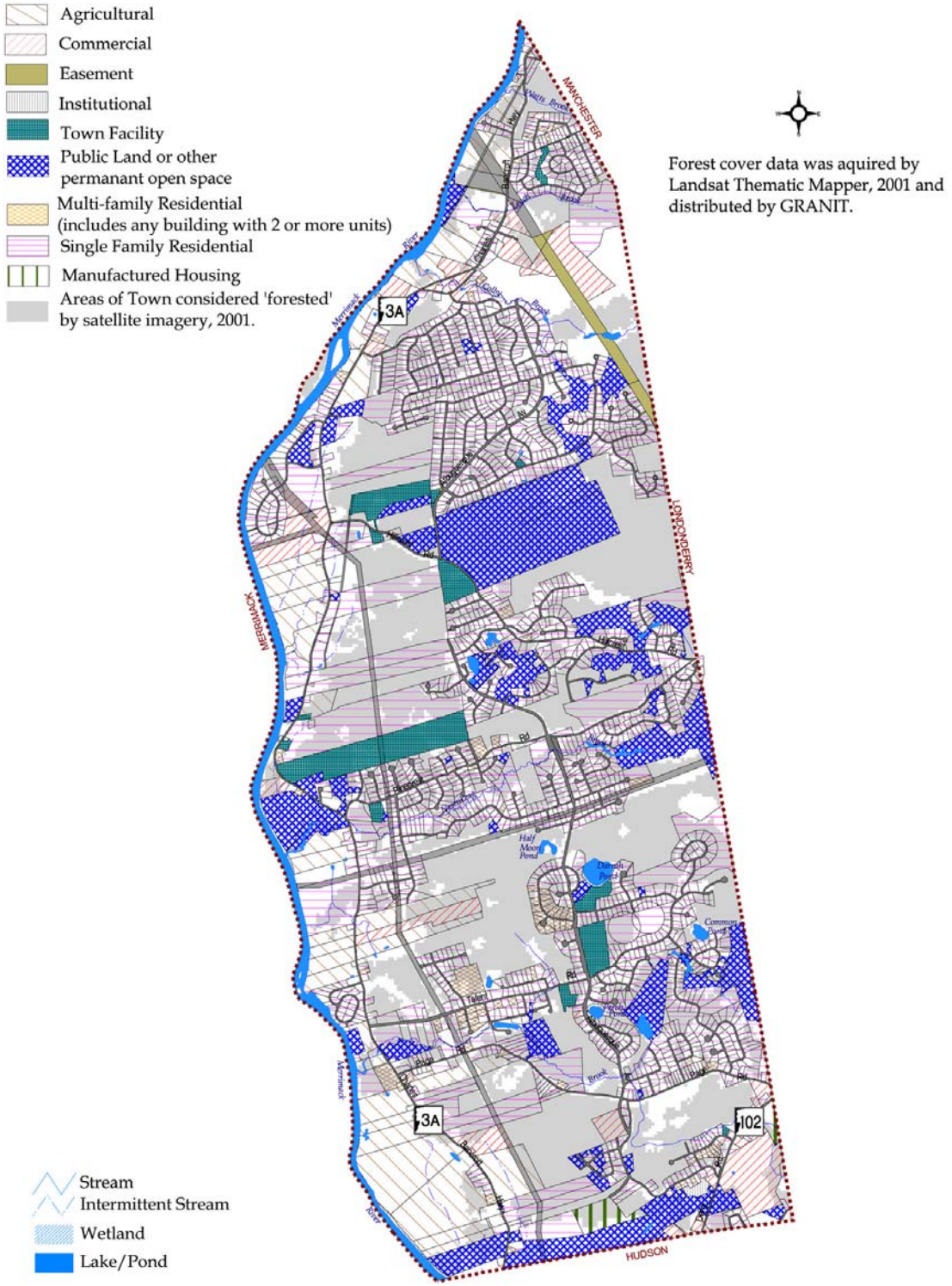


Table VIII-1: Existing Land Use

Litchfield, 2000

Generalized Land Use	Area (Acres)	Percentage (% - All Uses)
Single Family Residential	3,683	37.9%
Vacant	2,834	29.0%
Public Land	1,075	11.0%
Agricultural	903	9.2%
Road	470	4.8%
Commercial	238	2.4%
Industrial	165	1.7%
Multifamily Residential	140	1.4%
Utilities	55	0.6%
Manufactured Housing	46	0.5%
TOTAL	**9,784**	**100.0%**

Source: NRPC 2000.

Notes:

'Vacant' land includes water, which totals 256.5 acres.

The acreage of each land use category is based on the Municipal assessment database of September 1999.

C. EXISTING LAND USE PATTERNS

The characteristics of Litchfield's existing land use patterns are pictured in Map VIII-1 and presented in Table VIII-1. In preparing the 2000 land use database, the NRPC consulted local assessing records and cross-referenced this data with other sources, in particular windshield surveys to confirm the land use on parcels. Other resources reviewed included an inventory of active agricultural properties compiled by NRPC in 1999, an inventory of conservation properties from the Land Conservation Investment Program (LCIP) compiled by the Society for the Protection of New Hampshire Forests (SPNHF) for UNH, and other anecdotal evidence.

In 1999, NRPC updated the local parcel database to incorporate recent subdivisions. This made it possible to join parcel boundary data with assessing record information supplied by the Town. Joining these databases provides a means of mapping relevant data on a parcel-specific basis. Once the data were joined, NRPC queried the data to map out the land use for which a parcel is assessed. The NRPC also prepared some 'customized' land use codes to refine the information according to the following nomenclature: Single Family Residential, Multi-family Residential, Manufactured Housing, Commercial, Institutional, Public Lands, and Forest and Other Undeveloped Open Space. One reason this coding is needed is to identify vacant lands. NRPC applied controls that reviewed building values and land use status to determine vacancies. Parcels coded 'mixed use' in the assessment database were classified commercial for this study. Furthermore, there was no means for determining commercial versus industrial uses in the assessment database; therefore, any parcels coded by NRPC as industrial are based on local knowledge of specific uses and activities occurring on individual properties.

The data in Table VIII-1 confirms that residential uses are a dominant feature of the landscape. With extensive residential development over the last 40 years, community character changed from rural-agricultural to more rural-residential, or suburban. In fact, high rates of residential development consistently place Litchfield among the fastest growing municipalities in New Hampshire. A common landscape feature is now single-family homes on approximately one-and-one-half acre lots. Not

including developed farmland, or 'vacant' or 'public' lands approximately 75%, or 3,729 acres, of the remaining land is within residential categories. The Town may be referred to as a "bedroom community" from which residents commute to adjacent communities for most employment, shopping and service needs. While the residential Town character is desirable to many people, population growth, fiscal instability, increased travel time to employment and commercial centers, and a lack of local employment opportunities are factors that point to a need for nonresidential development.

Laying-out Albuquerque Avenue in the 1970s enabled residential growth in the interior of the community, taking pressure off NH 3A, and hopefully assisting the retention of large contiguous farming operations in areas of prime agricultural soils. According to the 1999 NRPC inventories, active agricultural lands that are intensively cultivated constitute 903 acres. According to RSA 674:26, (2001), an agricultural use means land used for: agriculture, farming, dairying, pasturing, apiculture, horticulture, floriculture, silviculture, and animal and poultry husbandry. Although statistics were not compiled for the acreage covered by all of the categories within this definition, there appears to be some forested area used for silviculture. Areas with the current use designation and probably constitute another 200 to 400 acres.

Preserving agriculture in the community is a primary goal of this Master Plan. There is an eminent threat of loss of agricultural land to new development, especially as other readily developable land in the region becomes scarce. The extent to which agricultural preservation has been studied during recent years, and strategies being considered to promote conservation of agricultural resources, are discussed below. Additional discussions are ongoing regarding farmland protection and creative alternatives for the preservation of these prime agricultural soils. Consensus among municipal officials, Town Boards, and land owners, leading to two or three viable objectives for short and long range preservation should be a high priority of the Town.

Starting with the early agrarian history, the main commercial activities in Litchfield were predominantly farming and a few small and disperse water-powered mills. Today the mills are no longer present, but there have been gravel excavations and a golf course sited within the community. The NH Route 102 corridor and the northern 3A corridor are the primary locations of more recent commercial development, consisting of limited retail and neighborhood commercial uses such as very small service businesses, retail stores, institutions and small offices. There are also produce stands, nurseries and pick-your-own berries at the farms on 3A as well as a small family fun park located in the north part of the highway corridor.

Recreational and institutional uses are scattered throughout Town. Among the main recreation assets are: Litchfield State Forest; a golf course near 3A and Hillcrest Road, the aforementioned fun park, and the fields and open space provided at the public and private schools. Perhaps because Litchfield is situated adjacent to the largest communities in the State, there are considerable areas of utility easements that extend in both north-south and east-west configurations across the community. The regional electric transmission lines within these easements cover more than 300 acres, consisting of 56 acres owned directly by the utilities, and another 250 within utility easements. Because this land is actively maintained clear of wooded vegetation, the areas provide unique habitat for wildlife.

In terms of utilities, there is also one 125-foot high cellular communications tower situated on industrial lands in the north end of Town. Due to topography and tree stands, the tower is not readily visible in Litchfield beyond the zone within which it is situated, although it is visible from Merrimack. Cell towers usually rise above the forest canopy and are located on high topography; therefore, they present potential to detract from views and the visual character of communities. The Planning Board actively promotes collocation of other telecommunications equipment on this tower to preserve the community's visual appearance to the greatest extent possible. If a need to locate additional tower in

Litchfield is articulated, it is the objective of the community to collocate these on the existing tower and also to minimize the adverse visual impacts that such a use could present.

Other utility parcels in the community consist of well fields owned by the Town of Hudson and Managed by Pennichuck Water Works (PWW). The well parcels are on the east end of Talent Road and PWW owns three riverfront lots in the Broadview Acres subdivision on 3A.

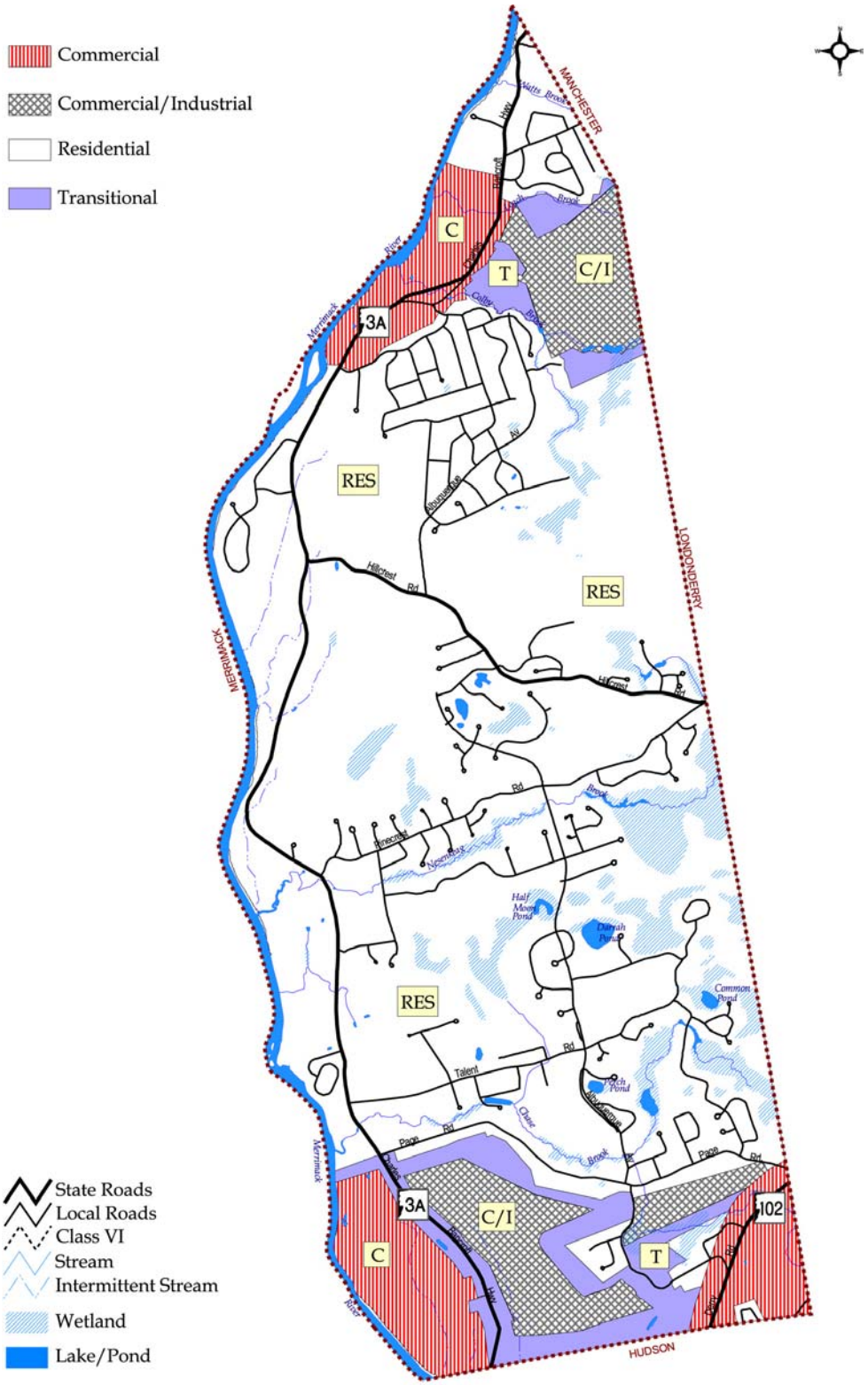
As noted, a dominant land use feature is stand alone single family homes on one acre lots, although there are limited areas in southern parts of Town and along 3A that contain mixtures of single family homes with higher density duplexes and apartment houses. Multi-family dwelling units (3 or more dwelling combined) represent 4.9%, or 118 of all 2,432 dwelling units that existed in the community at the end of 1999. Multi-family dwellings are concentrated in two distinctive settings: 1.) in buildings that are part of an apartment community with access roads for exclusive use of the residents and 2.) scattered throughout mixed residential neighborhoods with shared access roads. The density of apartment units is somewhat high in view of the fact that none are served by public sewer or water. Pagewood Oval Apartments includes 30 units on 6.8 acres, or 4.4 units per acre. One apartment building, off of Woodland Drive, was constructed at over 8 units per acre. Multi-family housing with greater than two attached units is no longer permitted in any zoning district within Town.

While duplexes are permitted in the residential zone, development of this type of housing in the last ten years has been minor. Duplexes represent 3.6%, or 88 units within the total housing stock. The majority of duplexes are located near Darrah Pond, along Stark Lane and around Talent Road with the remainder scattered throughout Town. Duplexes are permitted on one-and-a-half acre contiguous dry area lots.

The adoption of a Housing for Older Persons ordinance in 2001 has brought an increase in duplexes, though restricted to persons 55 years of age or older. Requirements encouraging clustering of up to four units together and providing 50 percent open space have created an incentive to duplex units.

The Town has 121 mobile or manufactured homes, as reported in Census, 2000; most within three mobile home parks in the southern end of Town. The housing density in these mobile home parks is generally higher than that which is customary for residences not serviced by public sewer or water. The Hillsboro I Mobile Home Park has a density of close to 4 mobile home units per acre. Hillsboro II is even denser with over 15 units per acre. Olson's Mobile Home Park has a density of less than two units per acre. The septic systems in these mobile home parks may have the potential to leach into groundwater and present contamination due to the high concentration of individual septic systems. Of critical concern is the Hillsboro II Mobile Home Park, which not only has the highest density, but is also located close to the southern Litchfield area suspected to have high potential groundwater yield.

Map VIII-2: Zoning Districts



Map VIII-2 shows the current zoning in Litchfield. In the 1980s, commercial and industrial zoning was expanded in an attempt to facilitate more non-residential development and also in anticipation of the Circumferential Highway construction near the southern border with Hudson. The areas of commercial zoning district added in the 1980s are segregated from residential portions of the community by a 'Transitional' zoning district in which limited commercial development is permissible. It is a goal of the Planning Board to promote economic development in these non-residential zones, to diversify and increase the tax base and at the same time preserve the unique character of the community. The Economic Development chapter discusses the basis and details of a local economic development strategy.

D. DEVELOPMENT CONSTRAINTS

Buildout analysis is a tool available to quantify the future potential for new development -- it highlights natural physical constraints to development and combines these with existing land uses and current zoning policies to show how these factors promote certain land use patterns in the future. The buildout analysis characterizes the future development potential based on the available Developable Land Area (DLA). DLA land is that which is not constrained from future development by natural features, wetlands, floodplain or permanent steep slopes or manmade features such as roads, utilities or existing building development. The buildout potential is examined for both the residential and non-residential sectors, the latter consisting of retail, commercial and industrial land use sectors. The findings from buildout analysis may be used to project future potential population growth, housing and commercial development in Litchfield. The predicted future development patterns may also used to estimate the annual fiscal impact of new development at full-buildout.

Using geographic information system (GIS) analysis, an estimate of remaining residential zoned land was conducted by the NRPC in consultation with the Litchfield Buildout Committee in October 1997 during production of the Town of Litchfield Buildout Analysis. For this study, the Planning Board updated figures generated in that study and also updated nonresidential zones analysis originally generated by the NRPC in 1999 in conjunction with the Economic Development Working Group, a subcommittee of the Planning Board. Both processes involved identifying already developed parcels and development constraints on remaining lands to determine the maximum build-out potential. Development constraints considered were:

1. Lands that are already developed with buildings and other physical infrastructure; and
2. Lands with the physical constraints:
   a. Wetlands;
   b. 100-year floodplain; and
   c. Steep slopes (permanent land features, excluding excavations, with slopes greater than 25%).

Development constraints are general landscape conditions that are likely to pose a barrier to using land for new building development. These constraints are evaluated by zoning district sub-areas (large contiguous portions of the individual zoning districts) to derive the quantity of land that remains to be developed in Litchfield. Due to the extent of wetlands, floodplains, and the very limited areas of steep slope in the community, approximately 1,542 acres, or about 16% of Litchfield's land area is considered undevelopable.

Approximately 5,620 acres, 57.4%, of the Town's remaining land has been developed with buildings and accessory uses. Due to limitations in the design the Litchfield property assessment database, it was not possible to go beyond a general analysis of constraints and land use, such as at a sub-parcel level. In other words, at this point it is not possible to assign the portion of a parcel that is

developed using the electronic database. As GIS capabilities of the Town and Regional Planning Commission are expanded in the future, it should be possible to perform more precise parcel-level analysis of the buildout potential on individual lots. For this study, if a parcel demonstrated any building development, it was coded 'built'. Actually, there are many lots in the residential and non-residential zones which have some building development and which could receive significant additional building development. This area could involve roughly 500 acres in commercial zones and in residential zones, it could be another 1,000 acres.

After determining that 1,541.5 acres, 15.8%, of the entire Town is constrained from development by natural features or existing building development, 15 percent of the total vacant developable land (DLA) was factored out to account for future roads, public utilities, and lot irregularities. Restricted lands, such as ones containing conservation or agricultural preservation restrictions were also subtracted from the total land area to determine the future developable land area.

Land was assigned to each of the zoning districts, and the amount of unconstrained land in each district was divided by the minimum zoning density permissible in each zone. Simplified for the buildout analysis, the minimum lot size is assumed to be one acre of contiguous dry land; however, for non-residential development a minimum lot size of one acre must be approved by the Planning Board. The result was an upper-limit showing the total number of new units of development that could be achieved in each zone. It is important to understand that this is a "worst case" scenario that does not consider development constraints that may arise from oddly shaped lots or other factors such as the assignment of conservation restrictions or property owners' intentions to keep land in an undeveloped state. Rather, it is assumed that over time, with increasing demand for open land and accompanying development pressure, lots are likely to be reassembled and development opportunities maximized.

Table VIII-2: Future Developable Land

Litchfield, 1999

	Total Acreage		
Zoning District	"Built Upon" Land	Naturally "Constrained" Land	Developable Land Area (DLA) Or "Unconstrained" Land
Residential	4,543.0	1,246.7	1,661.8
Northern Commercial/Industrial	104.7	66.1	107.5
Southern Commercial/Industrial	173.4	82.3	139.2
Northern Commercial	132.3	7.2	157.7
Highway Commercial– (Rte 102) Commercial	152.2	48.7	24.7
Southwest Commercial – (Rte 3A)	31.9	1.7	295.9
Transitional (North)	24.9	18.9	83.4
Transitional (South)	225.0	69.6	152.7
Water	0.0	234.4	0
Total	**5,620.4**	**1,541.5**	**2,622.9**

Source: NRPC.

Notes:

1. Land already in use based on NRPC, 2000 Generalized Land Use Classification from Town Assessor's database.

2. Poorly and very poorly drained soils including wetlands (Hillsborough Co. Conservation District, 1986)

3. Soils with septic limitations (NRCS, 1981)

4. Steep Slopes (25% or more; Class D and E Soils--NRCS, 1981)

5. Water Bodies

6. Depth to Bedrock (less than 60 inches to bedrock, NRCS, 1981).

Table VIII-2 shows the total constrained and developable land area in the community broken down by zoning districts. Of the approximately 2,623 acres in Litchfield that are vacant and unconstrained, 37 percent are within the commercial zoning districts and 63 percent are in residential areas. It is clear that there is significant development potential in both the residential and non-residential sector in the future.

1. Residential Zones Developable Land Area (DLA)

Under existing zoning, there are approximately 1,662 acres of DLA in the Residential District. As noted the minimum lot size for residential lots is one-acre contiguous dry area. Based on a review of Assessor's data. In recent years it appears that approximately 1.4 acres of wet and dry area has been needed to configure 1-acre dry lots (the 0.4 acres would consist of land classified as constrained).

Table VIII-3: Residential Sector Future Developable Land Area (DLA)

Litchfield, 2000

Zoning District	"Built Upon" Land	Total Acreage "Constrained " Land	Developable Land Area (DLA) "Unconstrained" Land
Residential	4,543.0	1,246.7	1,661.8

With 2,432 residential units at the end of 1999, it is estimated that at full buildout there is potential for an additional 1,661 residential units. The Town population in 1998 was estimated as 6,844 persons. Using a 1990 US Census figure of 3.20 persons per housing unit, it is projected that the population at buildout could range up to 12,159 persons.

Roughly 400 acres of the DLA within the residential zoned land is currently under active agricultural use. The 1997 Buildout Analysis by the Litchfield Buildout Committee predicted that preserving some farmland from development could result in 256 fewer housing units. Under that scenario, buildout population would therefore be decreased by 819 persons, or more persons, resulting in a total buildout of 11,340. For development of the this Master Plan, there was considerable discussion of whether farmlands in residential zones should as classified as developable land area or if it should be considered constrained as an existing commercial use. The Planning Board has decided to classify the land as DLA because, aside from the potential for pesticide contamination, these areas probably could easily be converted to residential development. In fact, in the last 20 years, there has been consistent decline in the amount farmland due to residential development.

Currently, there are limited local resources available to promote preservation of farmland, although in recent years there have been budget appropriations approved for land conservation. At the local level, there is an active Farm Preservation Committee which is formulating strategies to preserve agricultural lands and which is also assessing which areas are of the highest utility to attempt to preserve. Although there has been considerable momentum recently to promote awareness of the potential loss of farmland, by presenting all farms as DLA, it is possible to show development potential if no action at all is taken to conserve these resources. Furthermore, for the purpose of impact fees, attributing all farmland to the potentially developable category ensures that all potential development that could go forward is accounted for.

One other development scenario that could be considered possible, although improbable, is development of all duplexes on 1.5-acre contiguous dry lots. Under this scenario, still assuming 3.20 persons per dwelling unit, there could be a buildout population of 13,934. Since there have been fewer than 15 duplexes built in the last five years, the practical importance of this scenario may be a need to

adjust the estimated buildout population upwards slightly, such as by 150 additional units, and therefore 480 additional persons, to account for some duplex development in the future.

2. Non-Residential Zones Developable Land Area (DLA)

Table VIII-4 shows future development potential in Litchfield commercial zoning districts. In the Commercial, Commercial/Industrial, and Transitional Districts, approximately 41%, or 961 acres of land, of all land within the commercial zones, are suitable for future development. Of approximately 2,623 acres in Litchfield that are vacant and unconstrained, 36.6 % are within the commercial zoning districts. The natural constraints to development within commercial zones consist primarily of poorly drained soils.

Table VIII-4: Non-Residential Zones Estimated DLA

	"Built	Total Acreage	Developable Land Area (DLA)
Zoning District	**Upon" Land**	**"Constrained " Land**	**"Unconstrained" Land**
Residential	104.7	66.1	107.5
Northern Commercial/Industrial	173.4	82.3	139.2
Southern Commercial/Industrial	132.3	7.2	157.7
Northern Commercial	152.2	48.7	24.7
Highway Commercial– (Rte 102) Commercial	31.9	1.7	295.9
Southwest Commercial – (Rte 3A)	24.9	18.9	83.4
Transitional (North)	225.0	69.6	152.7
Total	**1077.4**	**294.8**	**961.1**

Well over 50% of the developable land in the non-residential zones is currently in agricultural use. In addition to natural constraints and developed area, approximately 600 acres within commercial zoning districts are classified as prime agricultural soils. Prime agricultural soils are not a constraint to development per se, but the Planning Board has identified preservation of prime agricultural soils in an open state suitable for farming as important to preserving the rural-agricultural heritage of the community. Preserving large contiguous areas of high quality farmlands is also a major land use and economic development goal. The prime agricultural soils are a unique and valuable natural resource deserving special attention in order to preserve them for future generations.

E. CURRENT ZONING AND EXISTING LAND USE REGULATIONS

Litchfield has utilized several land use regulation methods over the years to ensure a quality built environment. In 1949, the Town adopted its first zoning ordinance in order to regulate the location and use of buildings for the purpose of promoting health, safety, morals and the general welfare of the community. The year 1957 saw the creation of a Planning Board and the adoption of a building code. The context of this section is that while the Town has progressively used zoning to foster decent building development, direct growth, and promote public health, there has been some degradation in local environmental quality. Thus, the goal of the Master Plan is to promote the adoption of additional zoning and regulations that will help preserve contiguous open space and local environmental quality, including a healthy natural environment and maintenance of the agricultural base. At the same time it is a goal of this plan to foster land uses to enhance the economic base and promote fiscal stability in the local public sector.

The current zoning ordinance provides seven primary zones and three overlay zoning districts. Map VIII-3 shows the primary zoning districts. In Litchfield there is one residential zoning district consisting of 7,452 acres or 76 percent of all lands in Town. Another 2,333 acres, or 24 percent of all lands,

are within commercial zoning districts. There are four main non-residential zoning districts in Litchfield that cover eight locations:

1. Commercial/Industrial Service District, broken into north and south parts, with only slightly different permissible uses, totaling approximately 673 acres;
2. Commercial Districts, approximately 1,085 aces, in three distinct zoning districts:
   a. Highway Commercial District (Route 102),
   b. Northern Commercial District;
   c. Southwestern Commercial (Route 3A) District; and
3. Transitional District, approximately 575 acres.

1. Residential District

The Residential District comprises 76% of the Town. This zone consists primarily of single-family homes on one-acre lots, and is subject to a disproportionate amount of building activity. The data indicates the potential for another 1,662 new lots to be created under current zoning. In addition to single family lots, the main permissible uses in the zone are: duplexes on 1.5 acre lots, farming and related agricultural uses; sand and gravel excavations, home occupations, fences and utility structures less than 200 square feet. Manufactured housing is also permitted in approved Manufactured Housing Parks within Residential Manufactured Housing Districts.

Residential development in previous decades has shown moderate sensitivity to the physical characteristics of the land and its environmental features. Most developments conformed to a grid subdivision pattern, with minimal attention given to prominent natural features such as agricultural soils, ponds, tree stands, wetlands, or the Merrimack River. In many cases, these features were viewed as little more than obstacles to more intensive development, and were rarely appreciated for their scenic, recreational or natural habitat values.

In recent years, the Planning Board encouraged a somewhat more sensitive approach to development, primarily by providing careful analysis of the site characteristics, the relationship of proposed development to the features of the land, and by encouraging the use of conservation easements and dedications of certain lands to the Town. In this way, a stronger degree of environmental protection is achieved and the overall quality of residential developments is enhanced. However, a continuing problem in many subdivisions is the potential for water quality deterioration due to extensive site clearance that removes high proportions of trees and other natural cover. Excessive site clearance fundamentally changes the natural systems, such as altering drainage patterns, changing the mix of vegetation and habitat, by impacting ambient air temperatures and the degree of sunlight, and by increasing water temperatures. Subdivisions that result in insufficient forest, trees, other natural cover, and open space detract from a goal of maintaining a sustainable pattern of residential development.

As discussed in the Natural Resources chapter, one major problem brought on by poorly managed residential-level site development is the potential for water quality deterioration. In addition to the risk of improperly maintained septic systems, very large surges in demand for water during warmer weather due to demand for water to irrigate lawns is straining the capacity of the water supply network. Furthermore, since Litchfield contains urbanized areas according to 1990 and 2000 US Census definitions, the community is required to comply with Phase II of Federal stormwater permitting or apply for waivers. Which may be allowed under specific guidelines. EPA Phase II of Non-Point Discharge Elimination System (NPDES) permitting requires a community stormwater management plan, including strategies to ensure that contaminants are not introduced into local surface waters. Adopting Best Management Practices (BMPs) will provide guidelines to prevent pollution from entering stormwater

runoff. One way for the community to comply with these measures is to ensure that new development does not provide the potential to convey detrimental off-site stormwater impacts. The continued used of open drainage and retention of more open space and natural cover are keys to realizing success in this arena.

2. Non-Residential Zones

Table VIII-5 provides an overview of permitted and special exception uses allowed within the commercial zones. The non-residential zoning promotes primarily light industry and commerce, with a lower land use intensity. Transitional zone providing a buffer from residential zones. Industries permitted consist of warehousing, offices, manufacturing assembly and agriculture related industry. One reason that these uses are permitted is that they are somewhat less likely to adversely impact ground and surface water supplies. As discussed further below, the Planning Board is evaluating the potential to facilitate the development of either sewers or community septic systems within these zones. As this process proceeds, an investigation should occur whether the list of permissible uses should be expanded.

Table VIII-5: Permitted & Special Exception Commercial Uses

Litchfield Zoning Ordinance, March, 2001

	Zoning Districts		
Type of Land Use	**Commercial**	**Transitional**	**Comm/Indus Service**
Bank & branch of financial service institutions	X		
Establishments offering goods for sale (retail)	X		
Restaurants (excluding drive-in)	X		X
Professional Office	X	X	X
Health care	X		
Personal services	X		
Hotels/motels	X		
Indoor theatres	X		
Recreational facilities and membership clubs	X	X	
Schools, nurseries and day care	X	X	
Funeral homes	X		
Research and testing labs	X		X
Agriculture	X	X	X
Gasoline sales	X		By Special Exception
Auto service and repair	By Special Exception		By Special Exception
Take-out/drive-in food	By Special Exception		By Special Exception
Retail sales of motor vehicles, supplies, equipment	By Special Exception		By Special Exception
Warehousing	X		X
Pre-manufactured equip. assembly, test, & repair			X
Wholesale			X
Computer services			X
Transportation Terminals			X
Excavation, mining and processing			X
Adult Entertainment[1]			X
Independent Living/Older Persons Housing	X	X	

Source: Town of Litchfield Zoning Ordinance, March 2001.

Notes:

In March 2000 voters approved division of the Commercial/Industrial Service District into two separate zones: 1) Northern Commercial/Industrial Service, and 2) Southern Commercial/Industrial Service. Adult entertainment is only permissible in the Northern Commercial/Industrial Service district.

A 1988 study by the Litchfield Industrial-Commercial Development Committee examined development potential in relation to the planned Circumferential Highway, limitations of commercial and industrial zoned lands at the time, and the feasibility of extending sewer utilities into commercial zones. The study showed that 1980's real property base expansions, primarily in the residential sector, were not enabling the public sector to keep-up with the cost of providing services. At that point, 80 percent of the property tax base was low-density single family homes and the new residential development was expensive to service. Furthermore, in the 1980s Litchfield had among the lowest taxable valuations in the region. An outcome of the 1988 study was expansion of the commercial/ industrial zones to the current zoning district boundaries. A potential problem is that since the expansion of non-residential zones over ten years ago, there has not been a significant increase in commercial development. While the Economic Development chapter discusses this subject in detail, this chapter does discuss the zoning and regulations that influence this type of development.

3. Transitional Zone

The Transition Zone comprises approximately 575 acres, or roughly 5.9% of the Town. The predominant existing land uses are agriculture and residential uses, although residential development is no longer permissible within this zone with the exception of single dwelling units that are part of mixed-use developments. The purpose of the zone is to provide a buffer between the lower density Residential Zone and non-residential zones; therefore, permissible uses are: professional and business offices; schools and day care; churches; recreation; and agriculture. NRPC estimates indicate the potential for another 236 new one-acre lots to be created under current zoning.

4. Commercial Zones

The Commercial Zone is located in the Route 3A corridor. The purpose of the zone is to serve the major commercial needs and business needs of the general public. The zone comprises 253.3 acres, or roughly 1.1% of the Town. The predominant land use is retail, industrial and office. NRPC estimates indicate that the commercial zone may yield approximately 479 additional one-acre lots under current zoning standards.

5. Telecommunications Ordinance

Litchfield enacted a telecommunications ordinance in 1998 to guide the siting of towers in a manner that does not interfere with views from public lands, natural scenic vistas, historic buildings or major view corridors. These uses are permitted only in the Commercial/Industrial Service Districts and the Highway Commercial District, subject to Site Plan Review.

6. Sign Regulations

Preservation of the Town's rural character is a key goal of the sign ordinance. The ordinance provides for "exempt" signs, which are those that require no permit, provided that they fall within the parameters set by the ordinance. Examples of exempt signs include historical markers, governmental flags, on-premise directional signs, etc. The ordinance also identifies signs that are prohibited, and encourages the preparation of a sign master plan at the point of proposing site development plans. A problem is that there is not a maximum sign size, which presents potential for proposals to site signs that are out of character with the local environment.

7. Growth Management

In March 2000, voters approved a residential Growth Management (Ordinance section 2100). The Planning Board sought the adoption of growth control in order to moderate a rapid rate of new housing development, especially since there is potential for higher rates of development in the future due to the Circumferential Highway coming to southern Litchfield and major road changes underway north of Town by the airport. One main problem is that local public facilities cannot accommodate unrestrained growth and many public services are being adversely impacted by rapid growth. In particular, the elementary and middle schools are at capacity. Establishing a mechanism to moderate the level of new residential construction promotes a sustainable rate of development and provides time to plan for capital facilities upgrades, to implement expansions and provide for orderly development.

Residential growth control will not influence the spatial layout of development and the ultimate mix of land uses in the community; however, it will influence the pace of change in the residential sector (the ordinance does not apply to commercial building). Growth management establishes a residential housing growth target based on the average annual percentage increase in building permits issued in the five adjacent municipalities over the last four years. Tying local growth to the level of change in the adjacent communities ensures that Litchfield will not grow more rapidly than the region. Annual growth targets are set by formulas that define the number of certificates available for allocation in the current period consistent with the growth target. Calculations indicate that it may take three to five years to slow the rate of new development to a sustainable pace so that the policy works as intended. Since growth management is predicted to reduce the pace of residential growth, it will take a longer period of time to reach buildout in the residential sector.

Growth management will not affect older person housing development in the community, as this land use category is exempt from the ordinance. Older person housing is exempt because this group does not consume school services and there is an identified need for this type of housing within the community. Furthermore, the policy is not expected to prevent new development as lots of record are guaranteed building certificates and approved subdivision proposals will be guaranteed a minimum number of Building Certificates per year. It is expected that phasing plans will need to be developed for each new subdivision in order to recognize the sequence of development.

The Planning Board is required to regularly monitor the growth trends in Litchfield and adjacent communities. In conjunction with routine capital planning, and the continued use of impact fees, it should be possible to reduce the potential for unmanageable residential growth, although it may take some time for the ordinance and coordinated planning to work as intended.

8. Impact Fees

Like growth management, impact fees will not influence the spatial layout of land uses. Nor will it the place of development.

9. Housing For Older Persons

Adopted in March of 2001, Housing for Older Persons is a new ordinance that is having an impact on development and land use. It was developed as a tool to provide adequate housing opportunities for older citizens, aged 55 and older and to offer an alternative to single family residential development, which historically puts great stress school facilities.

10. Subdivision Regulations

The subdivision regulations set forth the rules for the division of land. Per state law, the division of a land tract in two lots constitutes subdivision. The Town has procedures that enable a less exhaustive review process for "minor subdivision", which are those involving the division of one property into three or less parcels. Subdivision regulations have been consistently updated by the Board to improve the administrative process of platting new lots, to reflect the evolution and refinement of community goals and objectives, as well as to reflect improvements in contemporary land planning methods.

The subdivision regulations require the Planning Board to conduct a comprehensive site analysis, which calls for a narrative document that identifies the natural and man-made features of areas proposed to receive development including an evaluation of: soils, trees, water bodies, rock outcroppings, other natural resources, historic landmarks, and stone walls. This process is akin to an environmental impact analysis and it also calls for examination of the potential social and fiscal impacts of proposed development. As the available DLA has decreased, land proposed for subdivision typically has been more marginal and demonstrates higher degrees of development constraints than areas developed earlier. It is a goal of the Planning Board to ensure that new development does not detract from the community character and the ecosystem. Site analysis provides a means to obtain a wide variety of necessary site information, which the Board can use to comprehensively evaluate a proposed plat to ensure that the public health and safety is protected in the proposed design.

Site Analysis is a key ingredient for establishing conservation design subdivision provisions in local zoning -- which is a community character preservation and natural resource protection goal and implementation objective for the future period of this Master Plan. Conservation zoning is a focused approach to subdivision where open space preservation and greenbelt planning is the basis for a subdivision layout. Conservation design is a fair and reasonable process of subdivision that provides balance between the community's goal for retention of open space and rural character and private landowners' desire to realize a reasonable profit from development. Open space planning does not reduce building density; rather, this density-neutral approach applies site analysis and community resource protection goals to provide an arrangement of buildings and roads that is concentrated in areas that do not detract from the environment. In contrast with clustering, conservation design techniques preserve more open space and do not increase the overall level of development. Site analysis sets-up an examination of the natural resource suitabilities of a parcel and it provides insight as to where flexibility is needed in the layout of a subdivision. Reinforcing the Board's commitment to mandatory site analysis and educating developers about the flexibility and benefits inherent in conservation zoning will help prepare the community for the process of retrofitting zoning to adopt full conservation zoning. Analyzed against the objective of instituting conservation zoning, other portions of the subdivision regulations that the Planning Board should strive to upgrade are regulations do not allow for flexibility, such as reduced frontage and setback.

11. Site Plan Review Regulations

The site plan review regulations, which derive a statutory basis from the subdivision of land RSA 674:36, provide for Planning Board review of all plans for new development or re-development of non-residential uses and multi-family dwelling units (although the latter is not applicable under current zoning in 2000). Procedures are also in place that enable a less exhaustive review process for 'home occupations', 'minor site plans' and farm buildings.

One recent upgrade to these regulations is the incorporation of criteria for telecommunications facility site requirements (Section 165.00). Like the subdivision regulations, the Board adopted site specific soil mapping requirements for site plans and requires fire department review in the plat

submission requirements. Initiatives are also underway to upgrade the fee schedule and produce a site plan review checklist.

Larger municipalities in the NRPC region, such as Nashua, Merrimack and Hudson have all instituted active economic development programs and tied these to their planning and community development goals. Working with the NRPC in 1999 through 2000 the Economic Development Working Group subcommittee of the Planning Board performed analysis of the types of tools that the municipality could use to more effectively carry out local economic development functions. The process investigated methods to manage physical change and promote economic opportunities. Using the unique small town heritage of Litchfield as an organizing theme of its meetings, the group investigated how to preserve the features of the community that residents value, but to also accommodate new commercial development since well-coordinated commercial development can provide fiscal balance and enhance community appearance. Site design principles may be used to promote commercial development that is in character with rural New England community heritage. Excellence in community design can be promoted by using design standards to instruct people undertaking development on how to achieve high quality commercial projects that contribute to community character and which will help sustain the local economy.

12. Excavation Site Plan Review Regulations

The Excavation Site Plan Review regulations govern plans for the movement of earth under the provisions of RSA 155-E. These regulations have not been altered since a recodification in 1984. The regulations should be reviewed to determine if these are still consistent with the State regulation, which changed in recent years. The Planning Board should also evaluate whether the local regulations should be upgraded to provide more controls on this type of land use and bring the policy up to date so that it reflects up-to-date methods of managing this type of using contemporary engineering and site planning techniques.

F. RECENT ZONING AND REGULATORY CHANGES

A review of the recent history of zoning amendments indicates that townspeople generally followed the recommendations of the Planning Board. Some of the major zoning changes in recent years have involved the issues of adult entertainment and wetland and water quality protection. The following is a summary of major amendments that passed Town Meeting since 1991:

- A provision amended the Floodplain Conservation District.
- Amendment allowing for Special Exception uses in the Northern Transitional Zone, which were not included when the zone was created from the Rural Residential Zone.
- Amateur non-profit sports and recreation added as a permitted use in all zones.
- Added consistent requirements for home occupations.
- Adopted BOCA codes. (Note: NH is switching to a State Building Code in 2002 under RSA 155-A:2. The new State Code adopts the 2000 International Building, Plumbing, Mechanical, Energy Conservation codes and the National Electrical Code 1999.
- Adopted sections on: Board of Adjustment; Enforcement and Administration; Appeals; and Conflict and Severability.
- Adoption of a Telecommunication Facilities ordinance.

- A requirement that the minimum lot size, as specified in the Wetland Conservation District, must constitute at least one acre of contiguous dry area.
- Adoption of a Special Exception for the siting of adult entertainment establishments in the Northern Commercial Industrial Service District.
- Adoption of Growth Management.
- Division of the Commercial/Industrial Service Zoning District into two parts, a north and a south district.
- Housing for Older Persons.

G. NOTEWORTHY PROJECTS IN THE LAST FIVE YEARS

In 1997, the Planning Board received a proposal to develop a subdivision in the proximity of Grassy Pond. The subdivision was proposed around unique wetland, specifically one of the few remaining basin marshes in southern New Hampshire. Through a long process of review and after extensive negotiation with the property owner and the State of New Hampshire Department of Environmental Services, funding was obtained to procure the development rights to the site, thereby reducing the potential to degrade the rare habitat. This case is noteworthy because it highlights the potential to achieve more proactive, and less acrimonious subdivision by utilizing conservation zoning. If this valuable natural resource had been identified on a *Map of Potential Conservation Lands* well ahead of the property owner designing the subdivision, development would not have been proposed in such close proximity to the pond in the first place.

Another noteworthy project reviewed by the Board is a non-residential subdivision and site plan that resulted in the creation of four lots and a master site plan for St. Francis School and Church. This development occurred on former agricultural lands west of Route 3A. The application was challenging due to difficulty in providing a subdivision road that safely connected with 3A, that did not detract from the highway character and capacity, fit into a future street network, which was not fully designed. The area consists of a great deal of undeveloped agricultural land situated west of 3A that is zoned commercial and which is situated close to the future terminus of Albuquerque Avenue. It was also a challenge to minimize the impact of the new road upon residences that pre-existed the establishment of commercial zoning. Finally, the site is close to the Merrimack River and adjacent to Colby Brook -- major community natural resources.

In order to provide existing residences with adequate screening from new development, landscaping and tree planting were provided at the expense of the project proponent. This is clearly a case where more guidance was needed from the Master Plan and Site Plan Review Regulations on how to landscape new roads and utilize vegetation and other natural screening to attenuate the potential adverse impacts of new development. The process of exploring the layout of the road and its design features, particularly amenities such as lighting, sidewalks and signage was also hampered by a lack of flexibility in the road design standards.

As already noted, the Economic Development Working Group has examined the potential to use commercial design guidelines to guide applicants in the techniques and best management practices available to ensure that new development is high quality and does not detract from community character. Instituting design guidelines within the regulations, such as in the form of subject specific fact sheets, could provide guidance to the Board and potential developers on the optimum layout of a site. As development proceeds in the northern tier of the community, careful attention is required to ensure that developers provide adequate public facilities, appropriate links with adjacent undeveloped parcels and the evolving road network, and assist the integration of different land uses. Examples of features that

design guidelines can address are: sidewalks; public recreation and the layout of open space; different types of lighting fixtures and the use of illumination on site; landscaping; parking lot and driveway design; alternative building materials; energy conservation; building massing and building orientation; the relationship between sites; and the development of loading and service facilities. In this case, although the site design approved is appealing, the Board could have probably benefited from more guidance in the site plan or master plan, as to the layout of the site, and how to provide measures to integrate it with land uses that are developed in the future.

Finally, this case example showed that when future development is proposed on lots fronting 3A, it should be a Board policy to encourage that easements to backlots be enlarged from 50 to 75 feet, if it is feasible, and the private parties are amenable to such an arrangement.

H. FUTURE LAND USE ISSUES

The development pattern established for residential development in Litchfield has worked somewhat well for the Town. Success has been obtained in directing residential growth away from prime farmlands, and when residential and non-residential growth has occurred in the 3A corridor, the Board often succeeded in minimizing adverse traffic and landscape impacts within the corridor. Problems have been the high rate of residential development, with its attendant fiscal demands and the sprawling pattern of development that consumes increasingly larger areas of land per person and per housing unit. It is also somewhat of a problem that non-residential development has not increased significantly since the Master Plan was adopted, although zoning was reformulated in the late 1980s and early 1990s to enable commercial development.

"Smart growth" is a method or philosophy that can restore vitality to a community by recognizing the connections between development and quality of life. The features that distinguish smart growth in one community are likely to vary from those of another. Generally, smart growth invests resources in restoring community and vitality to town centers, regional centers and major urbanized areas, while protecting rural areas. It is town-centered, transit and pedestrian oriented and promotes a greater mix of accessible housing, commercial, retail and recreational uses. The development pressures of being sandwiched between the states two largest cities is even more reason to incorporate the smart growth philosophy. Smart growth encourages the conservation of open space, environmental resources and the agriculture and forestry industry prevalent in rural areas. Successful communities have one thing in common; a vision of where they want to go and of what they value in their community, and their municipal master plans reflect these values.[1]

I. CONSERVATION ZONING

As noted above, a primary Planning Board goal is to promote community character and natural resource preservation. The methods selected to achieve this goal is a comprehensive overhaul to the subdivision and site plan regulations to institute conservation zoning. In order to fully realize the benefits of this open space planning during the period covered by this plan the Board will also probably have to advocate for changing some components of the zoning ordinance, including the minimum lot standards and setback requirements.

A strategy for instituting open space planning should involve conducting a community-wide information session to educate citizens about the critical need for conservation zoning. The forum would provide the Board the chance to present its vision for the community. Then the Board could work with

[1] International City/County Management Association with Geoff Anderson, *Why Smart Growth: A Primer* 1998 and Smart Growth Network/International City County Management Association, *Getting to Smart Growth: 100 Policies for Implementation*, 2002.

residents to finalize a *Map of Potential Conservation Lands* and the text of the zoning changes for which voter approval will be requested.

1. The Town should investigate and implement, where appropriate, innovative land use practices that best preserve and protect the Towns resources, while providing for a fair share of the regions growth.

2. Solicit community-wide input that presents the draft map of potential conservation lands, with primary (severely constrained land) and secondary conservation areas (locally noteworthy or significant natural and cultural features of the landscape). The benefit of presenting the draft map to the community at this stage is that property owners and neighborhood residents who are intimately familiar with and able to identify mature woodlands, footpaths, wildlife habitat, historic sites, view sheds, etc., etc. can make recommendation regarding particular open space preservation priorities. Also important at this stage is sharing the Board's recommendations on the minimum percentage of open space, and the density bonuses for applicants who conserve extra open space, or who help achieve other key objectives, such as providing more than the minimum required public facilities.

J. OTHER RECOMMENDATIONS FOR LOCAL ZONING AND REGULATORY REFORM

In addition to its priority objective of instituting conservation zoning, other major land use related initiatives the Planning Board proposes to consider for implement in the future five years that this plan include the following items:

- Upgrade the Town zoning map.
- Advance wellhead protection. In terms of zoning, the Board should initiate studies to quantify aquifer potentials and characterize the recharge zones. The Board should also advocate for establishing a stormwater runoff performance regulation under Section 403.00 (Performance Standards). Links should be provided to the site plan regulations and Appendix D - Model Erosion and Sediment Control Regulations which reference documents that the Board has adopted to define which Best Management Practices (BMPs) are applicable to specific land uses, such as service stations, research and testing labs, transportation terminals and excavations operations. This will help satisfy EPA stormwater planning requirements that must be in place by 2003.
- Reformulate the zoning standards in the Southern Commercial/Industrial Service District to increase the probability that complementary new uses will be sited in that zone, with early recognition that the construction of the Circumferential Highway will fundamentally alter the market and development potential of this district. In addition to reducing setbacks and expanding the list of uses permissible by special exception, zoning changes should prescribe performance standards to ensure that groundwater and other natural resources in this zone are not adversely impacted by construction and the resulting new land uses. Community Character Guidelines (design guidelines) should also be adopted to ensure that development does not detract from the local visual environment.
- Associated with the prior bullet, pursue detailed wastewater facilities study and benefit-cost analysis, including an evaluation of the alternative technologies and different ways to configure infrastructure and organize a public or quasi-public administration to manage the provision of wastewater treatment in the Southern Commercial District.
- Provide a strategy for adopting a town center zoning district within the next three to eight years. This multi-year process would investigate which specific zoning criteria the Board

should support, including density, mix of permissible uses, and the potential boundaries and location of a village zone. This project should start small and promote the phased implementation of such a zone, with incremental additions to the zone, like new tree rings, that are adopted upon initial success. The demand for this type of zoning, is evident from 1998 Community Profile proceedings, where many residents articulated a need for community-building enterprise. A town-center would establish central place for social and commercial interaction, providing the potential to physically concentrate commercial, institutional and residential uses like in traditional New England villages. The Board may also investigate the use of transfer of development rights, off-site land dedication, or fee dedications in lieu of actual property donation as tools to achieve both a dense village-like environment and large areas of protected open space community-wide.

It is also recommended that the Planning Board investigate the following innovative land use controls as potential tools to preserve community character, support and protect agriculture, carefully direct new development and promote public health and well being.

- Promote a zoning modification to enable accessory dwelling units, by right, in districts where single family zoning is permissible. This will encourage housing opportunities for elderly persons and people who have non-traditional living situations, such as single persons, young workers or recent college graduates. It will also provide an income opportunity for homeowners. It is unlikely that this type of development would detract from existing community character.
- Encourage the institution of transfer of development rights to help achieve farmland preservation and provide incentive mechanisms necessary to help establish market conditions that will result in the development of village-scale mixed use style development within limited areas of the community.
- Institute agricultural zoning, such as 30-acre minimum lot size, to promote preservation of large tracts of high quality soils and traditional farmland.
- Have a dialogue with the area communities, the NRPC, the Southern New Hampshire Planning Commission, State officials and other stakeholders about the potential to configure growth boundaries, thereby establishing a regional-level mechanism to direct growth and preserve open space where there is not sufficient infrastructure provision and the effects of sprawl are most likely to prove detrimental to communities over the long-run.

K. CONCLUSION

It is clear that current land use trends and existing zoning point to the potential for sprawling development and natural resource degradation unless the community institutes more powerful measures to direct growth and minimize its impact on the community character and existing resources. Litchfield has utilized many traditional as well as innovative land use controls to manage the pace and fiscal impacts of development. However, up until now, the Board has been reluctant to direct growth to specific nodes in order to promote concentrated higher-density development, perhaps due to fear that higher density of development will detract from community livability. The Regional Environmental Policy Plan (REPP) by the NRPC from winter 2000 clearly identifies many open space areas that are threatened by future development. It is also clear that high proportions of open space could be lost unless bold regulatory action is embarked upon to promote preservation of these assets.

Recommendations made in the Environmental Resources Chapter of this plan that have implications for current zoning and land use should be reviewed by the Planning Board and considered for future zoning amendments. The following are the main recommendations for future land use:

1. A comprehensive agricultural land preservation program should be expanded by continuing to elaborate goals and strategies that will enable the Town, or another non-profit, to purchase the development rights to farms.

2. The Planning Board should examine, in detail, the potential to incorporate flexible dimensional requirements, and adopt open space zoning.

3. Zoning pertaining to water quality protection is of paramount concern to the Town. Future regulations and development reviews need to continue to evaluate the hydrologic impacts of development, and should encompass issues related to phosphorus or nitrogen loading, pesticides, road salt analysis and erosion control. For land use projects with the greatest impacts, a program of on going water quality analysis should be required.