

## **CHAPTER IV LITCHFIELD COMMUNITY FACILITIES**

### **A. INTRODUCTION**

This chapter reviews public services and utilities provided to the residents and businesses of Litchfield. Personnel, the current quantity and quality of equipment, existing and projected capacities of each department's facilities and service standards are analyzed along with the spatial layout of facilities in the community. Also examined are the assumptions, goals and recommendations that form the basis of local initiatives such as: the Capital Improvement Plan (CIP), impact fees and growth management.

Some key assumptions and findings of this section are:

- Rapid population growth has caused increased services demand. Public service demand increases will continue, although probably at a slower rate if growth control is adopted.
- Non-residential development will probably increase in a 20-year capital facilities planning timeframe. These sectors primarily consume public safety and public works.
- Litchfield experienced significant fiscal challenges over the last 20 years. Property tax collections did not cover the full range of demands for new services. The result was that the community had to put-off some capital improvements due to local fiscal constraints.
- Continuation of impact fees and the potential adoption of growth management requires attention to define capital needs and to routinely assess progress in upgrading facilities.
- Capital improvement planning fosters understanding regarding the relative and competing needs for public sector capital investment.

Statistics that can aid facilities planning are the rates of capital investment and the operating costs of municipal departments and committees. Table IV-1 shows budget expenditure (operating and capital costs) by department in 2001. Schools account for about ninety percent of spending, with public safety, public works and general government comprises the balance of expenditures. It is beyond the scope of this study to provide in-depth budget analysis on a department-by-department basis; however, the CIP does provide a detailed history of expenditures. Generally, there have been decreases in rates of capital investment compared with overall spending over the last ten years. It is recommended that the community make a greater attempt to maintain constant levels of capital investment in order to reduce the need for sudden expenditures due to problems that arise from a lack of investment and lack of attention to growth and facilities wear.

**Table IV-1: Expenditures by Local Government Subsector - 2001  
(Excluding Litchfield Schools)**

Sub-sector	Litchfield Dollars (\$)	Litchfield Percent (%)
Culture/Recreation/Conservation	85,540	4.0%
Fire & Emergency	257,808	12.2%
General Government Administration	661,170	31.2%
Health and Welfare	30,028	1.4%
Library	67,623	3.2%
Police	698,328	33.0%
Public Works	316,948	15.0%
<b>Total</b>	<b>2,117,445</b>	<b>100.00%</b>

**Source: 2001 Litchfield Annual Report.**

Demand for public service is typically expressed in terms of population. Standards are often based on square feet of community facilities demanded per capita or per 1,000 persons. Alternatively, standards equate the level of facility service consumed per square foot of residential or commercial development. Population estimates and projections by the NH Office of State Planning (OSP) in 1998 are used to extrapolate future public service demands based on population. These population growth estimates are also influenced by buildout potential based on zoning and the local developable land area (DLA). Buildout potential is discussed in the Land Use chapter, however, in order to explain assumptions regarding facility demand Table IV- 2 characterizes the predicted Litchfield buildout.

**Table IV- 2: Estimated Limits on Pubic Facilities Demand Based on Buildout Analysis**

Residential DLA (Acres)	Non-Residential DLA	Buildout Population	Notes
1,429 to 1,685	662	10,362 to 10,992	Zoning requires 1 contiguous dry area for the minimum lot size. Lower DLA figures assume agricultural land preservation. Assume 1.3 acre lots (contiguous dry part and wetland portion). Assume 3.20 persons per dwelling (1990 Census). Assume 20,000ft <sup>2</sup> of new commercial development per year. Assume growth management adopted.

**Source: NRPC 1999.**

For community facilities analysis, it is predicted that 2020 population will not exceed 11,675 persons, unless the 320 acres of active agricultural land in the Residential District is developed. The maximum buildout population could then reach 12,461. The assumption is made that agricultural land will be preserved. The maximum service capacity of any new facility should not exceed that which is forecast to be required to service a residential population of 11,675 persons and 500,000ft<sup>2</sup> of non-residential development. This analysis is based on uncertain science; thus, if it is proposed to expand a facility to serve a population greater than 11675, careful analysis should occur to document that demand is sufficient to warrant investing in additional capacity.

In the sections below, community facilities are analyzed in groupings by Public Safety, Public Works, Education and Human Services, and General Government. Conditions in the Litchfield Fire Department, Rescue Squad, and Police Department are evaluated under Public Safety. Public Works covers the Highway Department, Incinerator, Solid Waste and Recycling, Cemeteries and the water utility. Education and Human Services covers Schools, the Library, Recreation and the Conservation Commission. Finally, the Town Hall facility is presented under the heading General Government.

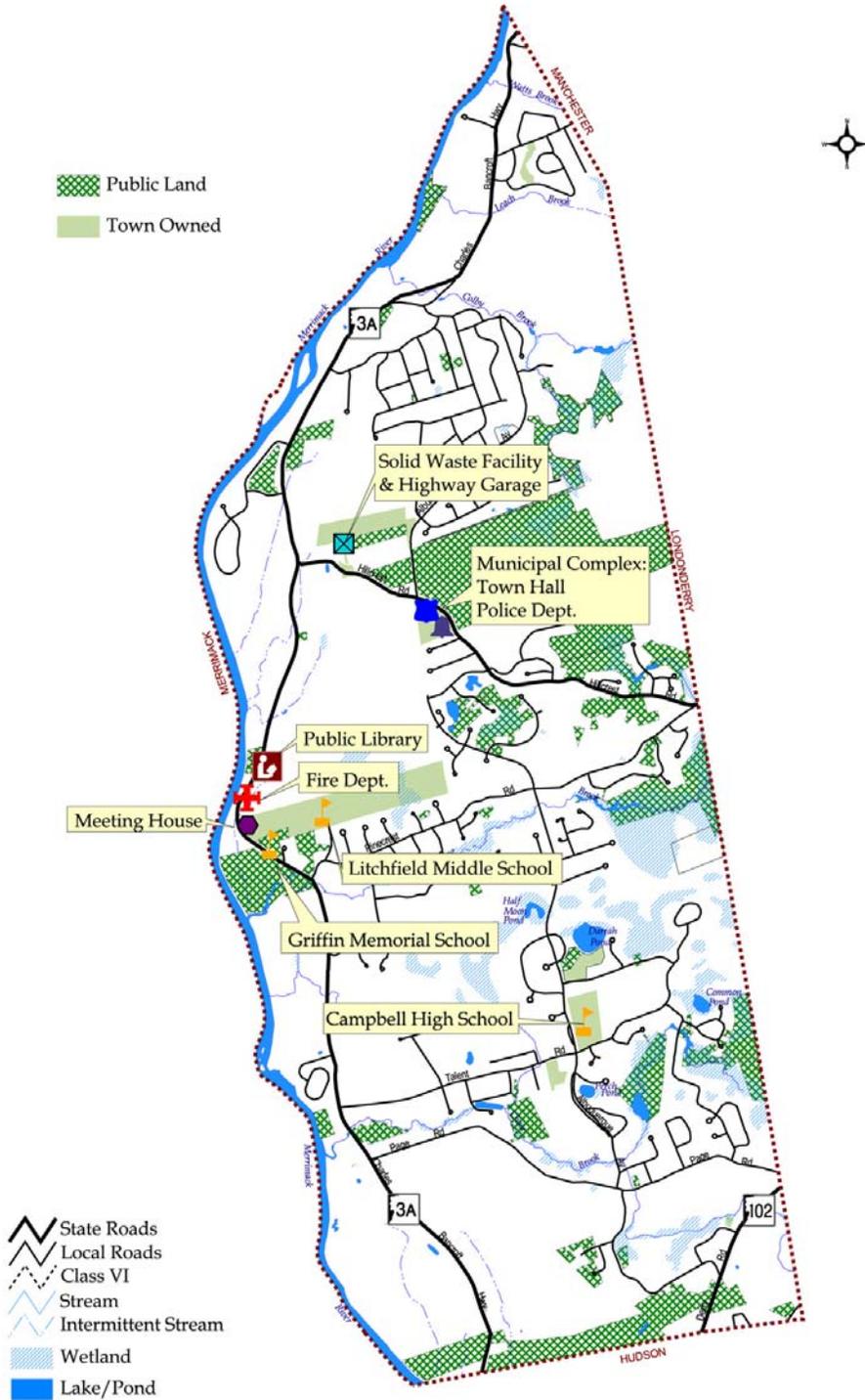
Local public facilities are shown on Map IV-1. The largest grouping is on Route 3A near Pinecrest Road. Bordering on a major river to the west with agricultural activity paralleling the Merrimack River, a similar orientation of the town center was the only geographic choice and remains close to the population center.

The old center is still the home for the library, fire department, town meeting house/museum, community church and the elementary and middle schools. A superb 18<sup>th</sup> century museum collection resides in the meetinghouse, managed by the Litchfield Historical Society who rents the structure from the Town for \$1 per year. Activities are regularly focused at the old center.

Discussion below examines the degree that Litchfield facilities are laid-out to provide efficient and economical public service delivery without promoting sprawl that consumes excess natural resources. Communities across the country are discovering that low-density development translates into higher operating and capital development costs. It is a goal of the Planning Board to address this cost-of-

sprawl affect by identifying innovative approaches to community facility development, investment, and land use that promote financial and natural resources conservation.

Map IV-1: Community Facilities



## **B. LITCHFIELD PUBLIC SAFETY**

### **1. FIRE AND MEDICAL EMERGENCY PROTECTION AND RESPONSE**

#### **a. Overall Program Description**



The function of the Litchfield Fire Department (LFD) is to protect and preserve individuals and property from fire damage and attend to other medical and emergency situations. To achieve this mission the scope of work is broad, including numerous objectives pertaining to fire and emergency preparedness. The LFD provides medical emergency first response, public awareness and safety training. Dispatch is handled by the Hudson Fire Department, which has 24-hours per day coverage and 9-1-1 capabilities. Ambulances are dispatched simultaneously with the initial emergency dispatch. Extensive staff training also occurs to keep up with contemporary standards and practices, including incident responses such as: carbon monoxide exposure and gas leaks, plane crashes, hazardous materials spills and motor vehicle accidents. Finally, the fire department inspects commercial and institutional buildings and provides local enforcement of the State Fire Code and Town fire safety ordinances.

To ensure adequate on-site access to water supplies for fire fighting the LFD works closely with the Planning Board. The general policy, articulated in the subdivision regulations, is to require connections to the public water system and installation of fire hydrants when connections to the water system are available within a reasonable distance. The fire department also comments on the strategic placement of hydrants during subdivision and site plan review.

The LFD also serves a key role in the provision of emergency management services, implementing plans in response to flooding, snow, windstorms and other severe weather and man-made emergencies. For example, during a 1996 winter storm 132 calls were placed for emergency assistance in a 48-hour period. Although there have not been any events in Litchfield, the department also coordinates local emergency response to manmade disasters. Finally, the department is integral to the Manchester Airport response plan, with Litchfield called immediately if a crash is eminent or has occurred.

In 1994 a local hazardous materials emergency response plan was completed and accepted by the State and Selectmen. This federally mandated plan assesses the risk of hazardous material incidents in transportation corridors and is used in conjunction with a regional-level plan. Litchfield's contribution is \$5,000 per year to the regional hazardous material response team, trained in chemical spill and other hazardous emergency response. The regional haz-mat service eliminates the need to establish its own force at much greater cost. Periodic drills to assure preparedness in response to emergencies are required by the Federal Emergency Management Agency (FEMA) and the NH Office of Emergency Management. Drills conducted in 1995 were successful and demonstrated that emergency responders are well trained and equipped. An additional drill performed in 1998 involved a mock air crash with a mass-death situation.

#### **b. Personnel**

A combination of on-call fire fighters and paid staff provides service to the community. This is enhanced by the single family residence economic base that is a relatively simple, less hazardous development pattern for which to plan fire response. The current staff roster is listed in IV-3. The LFD has two full-time paid firefighters that serve as

the first point of contact in emergencies weekdays, 8:30 a.m. to 4:30 p.m. In addition, there is an on-call volunteer staff of 28 that respond to emergencies at all times of day.

**Table IV-3: 2001 Litchfield Fire Fighting Staff**

Position	Number	
	Paid Full-Time Staff Position	Volunteer and Stipend Position
Chief	-	1
Assistant Chiefs	-	1
Captains	1	3
Lieutenants	-	3
Firemen	1	20
<b>Total</b>	<b>2</b>	<b>28</b>

**Source: 2001 Annual Report, Litchfield Fire Department.**

Some volunteers work outside of the community, which may constrain an effective and efficient emergency response. Based on 1990 US Census journey to work data, 94% of Litchfield's active workforce traveled outside Town to work, with 70% travelling to an adjacent municipality. Fire fighter availability, despite this statistic, does not appear to be a serious problem, especially if most new development is residential development that does not present high-order chemical fire hazards.

According to the National Fire Protection Association (NFPA), 95% of communities the size of Litchfield maintain a "mostly volunteer" or "all volunteer" department, although northeast U.S. communities typically have the highest ratios of career firefighters. The Town plans to continue the current system of staffing for the near future, although one option under examination is hiring a full-time Chief. Although staffing statistics for all NRPC communities were not compiled for this study, it appears that the communities are gradually adding more full-time paid staff to rosters. If additional information is sought to evaluate department performance, it may be advantageous to monitor the time it takes to mobilize a minimum crew of four to arrive at emergencies. Two first responders and two standby personnel as backup is standard procedure.

At this point, as a result of extensive training over the last decade, many firefighters are First Responder and Rescue certified. LFD serves a crucial community function by performing all medical emergency/rescue functions. The LFD performs emergency first response and once a victim's condition is stabilized, the Hudson ambulance squad is responsible for transporting victims to the hospital. The staff of 33 includes three paramedics; two Emergency Medical technicians (EMT) – I (intermediate); nine EMTs; and three First Responders. The average training is 100 hours per year and paramedics and EMT-I's have protocols with hospitals allowing them to operate at an advanced life support level.

**c. Facilities & Equipment**

According to the Chief, besides buildings, firefighting equipment is in good operating order and there are no acute deficiencies. This is a significant improvement from a decade ago, mainly because the Town has adopted long-range equipment replacement plans as identified in the CIP. The current policy is to utilize three year lease purchase agreements in order to spread costs over a number of years.

All fire department operations are based out of the main Charles Bancroft Road (Route 3A) station besides the dispatching service provided by Hudson. The site houses offices and storage for 10 major pieces of apparatus and extensive other equipment such as extinguishers, hardware and hoses. The two-story wood frame building contains 5,080 square feet including storage. In 1992, the NRPC estimated that approximately 2,500 ft<sup>2</sup> of the Route 3A facility was useable for purposes other than very basic storage. By most accounts, the department is constrained by insufficient space that is poorly utilized due the building age and outdated building systems.

Capital equipment of the Department is listed in Table IV-4. A 1991 new tanker/pumper truck represented the first major capital acquisition in a decade. In 1995, the Town obtained a new Spartan pumper-truck which is the primary vehicle operated by staff during initial emergency response. Two major pieces of equipment are 20 years old or more -- the department should carefully monitor maintenance costs on these vehicles.

**Table IV-4: Litchfield Fire Equipment**

Equipment	Model Year	Description
Engine 1:	1980	1,000 gal. Ford/Pierce pumper
Engine 2	1996	3D/Spartan pumper
Engine 3	1992	Kovatch/Mack tanker/pumper
Engine 4	1967	International tanker/pumper
Engine 5	1976	AMC/General M813 forestry tanker
Engine 6	1985	Chevrolet pick-up
Engine 7	1999	Ford Explorer
	1951	Utility trailer
	1999	Zodiac rescue boat with trailer and 25 hp motor
	1984	14 foot Grumman aluminum rescue boat with trailer
	1996	Jaws of Life
	1997	Defibrillator
	16	Portable hand-held radios
	14	Mobile truck radios
	3,000 feet	4 inch hose
	3,000 feet	2.5 inch hose
	3,000 feet	1.5 inch hose

**Source: Litchfield Fire Department, 1998.**

**d. Activity History**

The number of calls by the LFD increased from 266 in 1990 to 449 in 2001, representing a 69% increase for the period, or 6% per year. Descriptions of the quantity and types of incidents are presented in Tables IV-5. The number of structure fires and false alarms has remained stable even though the total number of housing units increased. The increase in incidents occurred within the category "special services" includes calls for emergency medical assistance.

**Table IV-5: Fire Department Incident Activity**

Type Incident	1990	1992	1993	1994	1995	1996	1997	1998	2001
Fires	31	41	41	34	45	45	39	41	42
Special Service	190	222	205	292	258	407	298	329	350
False & Accidental Alarms	45	37	32	60	30	32	43	31	9
Total	266	300	278	353	333	484	380	401	401

Source: Town Reports.

Table IV-6 further breaks down LFD calls by type. The most common call is "medical emergencies" not associated with accidents. This is the only category that experienced consistent increases from prior years over the period examined. Other categories vary depending on specific conditions each year, such as weather related impacts on power line problems and smoke investigations. In 1998, the Fire Department's response to over 160 medical emergency calls is double the 1990 figure. It is clear that medical aid has become a major part of the department role and responsibilities.

**Table IV-6: Fire Dept. Activity, by Type of Special Service & Miscellaneous Calls**

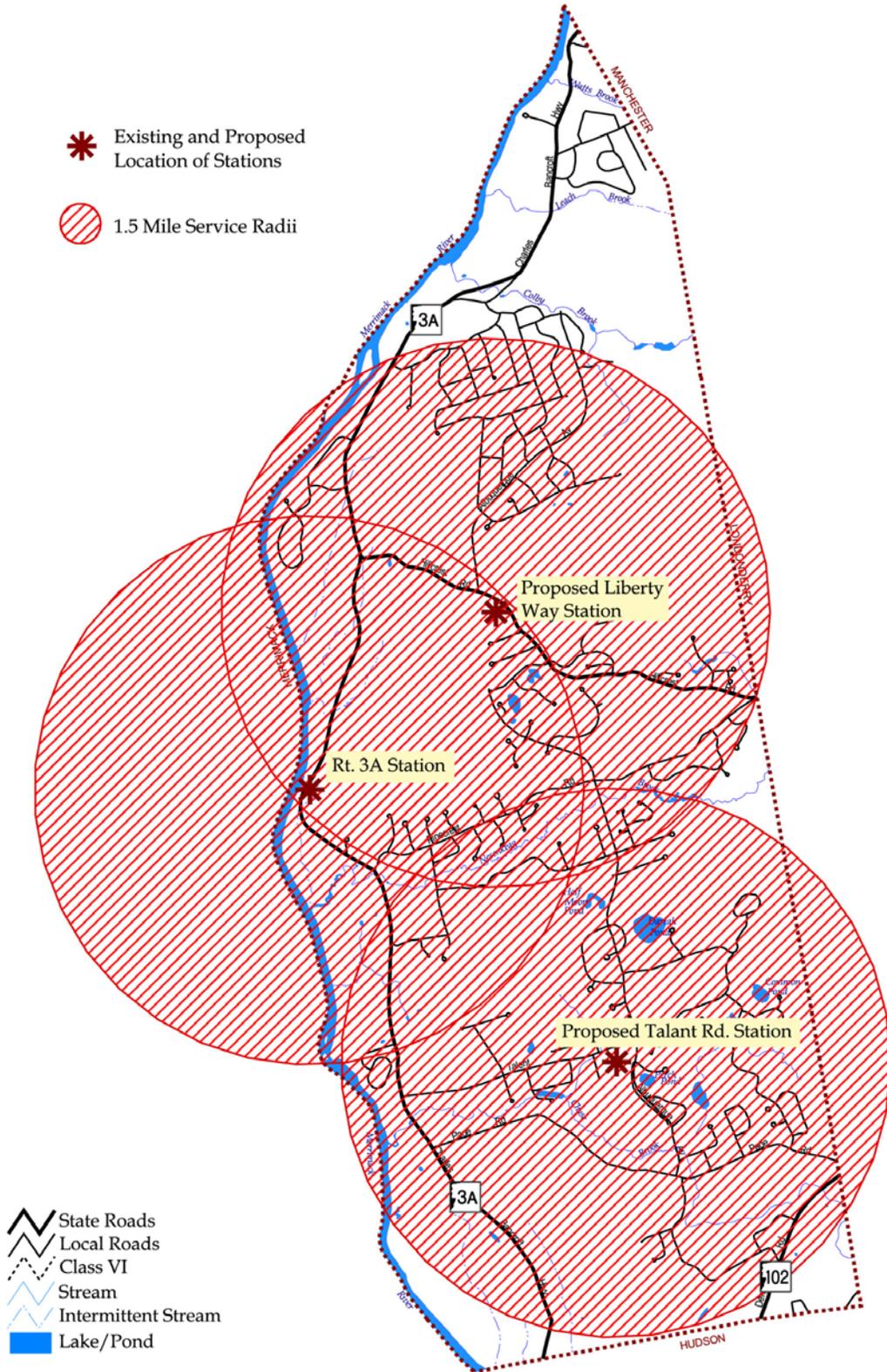
Type of Call	1990	1991	1992	1993	1994	1995	1996	1997	1998	2001
Arcing Wires & Power Line Down	8	6	7	8	28	6	70	16	20	5*
Brush/Forest Fire	11	15	17	14	9	16	8	7	5	12
Hazardous Condit/HAZMAT Incident	4*	9	2	11	6	8	10	6	3	10
Unauthorized/Illegal Burns	1	0	3	6	18	7	3	0	10	14
Medical Emergency (Non-accident)	80	61	75	85	120	107	116	154	163	211
Miscellaneous Fire Calls	9*	2	3	0	2	1	5	10	10	0
Accident (Primarily Motor Vehicle)	27	27	23	13	28	12	23	26	28	21
Motor Vehicle Fire	3	8	2	3	6	6	2	3	4	5
Mutual Aid Call (to emergency)	7	12	8	9	3	7	14	3	12	12
Smoke Investigation	3	2	6	18	22	26	18	18	18	27
Structure Fire	8	14	11	15	15	17	16	16	13	17
Subtotal of All Calls Listed Above	161	156	157	182	257	213	285	259	286	329
<b>Total All Calls (Including Ones Not Shown)</b>	<b>266</b>	<b>283</b>	<b>300</b>	<b>278</b>	<b>353</b>	<b>333</b>	<b>484</b>	<b>380</b>	<b>401</b>	<b>449</b>

\*Indicates a change in reporting method.

Source: Town Reports.

Motor vehicle accidents are one of the other large call categories, but it is noteworthy that given increases in residential development in the community and region, there have not been increases in the rates of accidents. If road level of service were allowed to decrease on roads such as 3A and 102, it would be likely to see increases in motor vehicle accidents. This lends support for attempts to lessen congestion on existing local roads by promoting the completion of Albuquerque Avenue.

Map IV-2: Fire Department Service Radii



**e. Facility Standards and Capital Development Priorities**

Table VI-7 shows optimum service radii standards for fire stations and Map VI-2 shows service radii, in miles, from the existing Route 3A station, and two proposed stations at Liberty Way and Talent Road. The map shows that using these standards, the existing station does not cover the extreme north part of the community. The station is also relatively far from all non-residential zones. With development of two new proposed stations, all residential development will have service and nearly half of the non-residential zones would be within the recommended service standard of 1.5 miles.

**Table IV-7: Optimum Service Radii Standards For Fire Stations**

Land Use Type	Engine, Hose or Engine-Ladder Co.
<b>Commerce/Industry</b>	
Dense	¾ mile
Other	1.5 mile
<b>Residential</b>	
Multi-family	1.5 mile
Lots smaller than 1 acre	2.0 mile
Lots larger than 1 acre	4.0 mile

**Source: Herr, Slater and Blum. 1978. Evaluating Development Impacts, MIT.**

Most commercial areas outside of the 1.5-mile radius from a station are in the Northern Commercial and Northern Commercial Industrial Service districts. The completion of Albuquerque Avenue will enhance service to the northern end of Litchfield by providing rapid access from the municipal complex. Similarly, the completion of southern segments of Albuquerque Avenue should enhance service to the southern tier.

A building facility space standard is used to determine how much new fire department building space is needed to serve the predicted 2020 population. A 1992 impact fee study by NRPC used a 0.425 feet of fire station per resident standard. Since the LFD appears to be using the whole Route 3A station at least for storage, it is suggested that the 1992 standard is too conservative. Rather, it is suggested that a better contemporary standard for the station needed per resident is 0.67 feet. Extrapolated to a buildout population of 11,675, there is projected to be incremental demand for an additional 2,270 ft<sup>2</sup> of building. Impact fees are eligible for financing the cost of constructing this part of new stations.

Based on the service radius standard the Department has articulated in the CIP an urgent need to develop modern facilities located closer to commercial zones and the highest densities of residential and institutional development. Architectural plans were developed in the late 1980s for a new station; however, local fiscal conditions have hindered its construction. The long-range plan for the department now consists of a proposal to construct both stations simultaneously with the main station adjacent to the municipal building at Liberty Way, and a satellite station on Talent Road. To help manage the fiscal impact of fire equipment purchases the CIP promotes capital reserve allocations spread out over time for equipment replacement. In 2000, a \$50,000 capital reserve account was established.

A new central station would include staff quarters, offices, garage and storage. The satellite operation will contain a garage and a yet to be determined combination of other functions. The satellite site will enable rapid response to the southern tier, including schools and areas projected to receive increased commercial development in conjunction with partial-build of the Circumferential Highway. Due to local growth over the last decade, there is a need to

reexamine the original architectural design of the Liberty Way Station to determine if the original space configuration still provides sufficient space to accommodate existing equipment and to confirm that sufficient space is provided to serve all of the need generated over the next 20 years. Impact fee revenues provide a good source funds for such study.

Town-owned land at Liberty Way is sufficient to accommodate development of the station and the expansion of Town Hall facilities. This location will provide good access to the north, south and east with the completion of Albuquerque Avenue; however, one constraint to service from Liberty Way has been the poor layout of Hillcrest Road, the primary route to Route 3A. The NH Department of transportation is currently beginning a realignment of the NH 3A and Hillcrest intersection. A benefit of having fire services located in a central municipal facility is that department staff can interact easily with other municipal officials without having to travel to Town Hall.

Future growth will also require the LFD to obtain additional new apparatus. According to the Chief, the highest priorities for fleet expansion and maintenance are obtaining 1) a Quint combination ladder/pumper in year 2005 that will replace older pumping capacity as well as expand the capacities of the Department; and 2) a medium or heavy duty specialized rescue vehicle for medical calls in anticipation of new highway and commercial development. Impact fees can be charged on a proportional basis to cover part of the cost for purchasing the vehicles. In 1990, the National Fire Protection Association (NFPA) estimated that 3/4 of communities less than 10,000 had aerial apparatus. The combination pumper/ladder is an innovative way to provide some aerial capacity without excessive cost.

**f. Findings and Recommendations**

*Municipal Benchmarks* by David Ammons, 1996, notes that quick response is instrumental to fire rescue and suppression. The components influencing response are: 1) the time between an initial call for help and emergency unit dispatch, and 2) time between dispatch and arrival at the scene. An average response of 4 minutes was the median for all communities examined. The Litchfield Fire Chief estimates that average response time to all calls in Litchfield is three to six minutes during daytime hours when paid staff is on duty and three to eight minutes all other times. Most fire emergency responses take less than eight minutes and none have been more than 15 minutes. In the southeast corner and the extreme north part of Litchfield, it is particularly difficult to respond to emergencies in less than eight minutes. The LFD should continue to explore different strategies to enhance service and eliminate the potential for lengthy response times. One way to promote quick response is to require hard-wire alarm installation in new homes by making this a mandatory requirement of subdivision approval. If more homes are built and equipped with wired alarm systems, it can be expected that false alarm incidents would increase.

The following findings and recommendations are provided for fire department operations:

- Commercial/industrial areas require better coverage. Since two new stations will provide adequate coverage, the Planning Board support development of these new stations.
- Completing Albuquerque Avenue will enhance LFD service to commercial zones.
- Architectural plans for a Liberty Way fire station are a decade old. An architectural study is planned for a proposed Campbell High School station, which includes a land swap with a parcel at NH 3A and Talent Road.. The Liberty Way plans should be updated to reflect contemporary needs and to obtain detailed construction cost estimates.

- Analysis should be provided to explain how the department will staff two fire stations.
- Should new facilities be constructed, the local insurance service rating may improve. This is an asset for residents and benefits attempts to increase the economic base.
- Hiring a full-time Fire Chief is recommended to improve overall operations and to ensure that there is a quick and adequate staff response to emergencies.
- When new commercial development is likely to require extraordinary fire services, such as for hazardous materials incidents, developers should pay for the unique services rather than the entire community having to pay for these improvements.
- Two trucks are 20 years old; the LFD should move to replace these two trucks.
- The Fire Department should assess the benefits and costs of implementing local dispatching with the police and compare it with the current arrangement with Hudson.
- The Fire Department should assess options available for increasing medical emergency response. Local dispatch is being considered at the present time. Alternatives that could be studied are private service contracts, collaboration with the police department or collaboration with adjacent communities.

## **2. POLICE DEPARTMENT**

### **a. Overall Program Description**



The fundamental tasks of the Police are to foster a good quality of life by deterring crime and promoting behavior that is appropriate to maintaining public health and welfare. The environment that Litchfield police carry out operations in is stable – New Hampshire displays a low crime rate as evidenced by low scores on the Crime Index calculated for all states in 1993 by the U.S. Department of Justice. However, Litchfield is situated in a densely populated and growing part of State. Like other services, demographic changes and the location of new development causes direct and indirect impacts on the demand for police services. Generally, growth is expected to cause an increase in the proportion of time dedicated to traffic management and accident response. If the rates of business development increase, there would likely be an increase in the proportion of time dedicated to monitoring commercial and industrial sites.

The police department practices community policing, maintaining a visible presence throughout Litchfield. Like other public safety officials, police are foremost occupied by non-acute duties such as traffic control and crime prevention, including promoting awareness of the problems associated with drug, alcohol and physical abuse. There is also extensive attention to youth issues in order to ensure a safe environment for this group. To improve the quality, effectiveness and efficiency of operations the Department has embarked on a multi-year effort to obtain State of New Hampshire Police Department accreditation.

### **b. Personnel**

In the fall of 1999, the Litchfield Police Department (LPD) had a staff consisting of 19 positions. The full-time equivalent of all staff is 14.5 employees. Staff is grouped in the following classifications: 1) Eight full-time police officers; 2) Eight part-time police officers; 3) One part-time animal control officer and 4) two full-time administrators-dispatchers. Since 1991, the LPD added two full-time patrol officers and increased one administrator from

part to full-time. This arrangement allows one or two officers to work on the day and evening shifts.

**Table IV-8: NRPC Region Police Department Employment Rates  
Full-Time Law Officers & Law Enforcement Employees Per 1,000 Population**

NRPC Municipalities Reporting to UCR in October 1997	Uniformed Only	Uniformed & Civilian	Population 1996 OSP	Uniformed Staff Per 1,000 Population	Uniformed & Civilian Staff Per 1,000 Population
Litchfield *	8	9	6,540	1.22	1.38
Amherst	14	15	9,663	1.45	1.55
Hollis	10	11	6,481	1.54	1.70
Hudson	32	43	21,072	1.52	2.04
Merrimack	33	44	23,200	1.42	1.90
Milford	23	27	12,660	1.82	2.13
Nashua	149	202	82,285	1.81	2.45
Pelham	14	20	10,374	1.35	1.93
NRPC Region Less Than 10,000 Average	-	-	-	1.41	1.54

**Source: Uniform Crime Report by U.S. Dept. of Justice, 1997 with NRPC derivation for NRPC Region Communities reporting.**

Table IV-8 compares the police staffing levels in Litchfield and the region in 1997 based on U.S. Department of Justice statistics. Litchfield has 1.2 full-time officers per 1,000 people. This is somewhat below the rate in other communities less than 10,000 in population within the Region that reported to the Uniform Crime Reports (UCR) in 1997.

According to the Chief of Police, new residential and commercial growth is also expected to stimulate demand for additional sworn officers. The department is currently fully staffed with the hiring of three part time officers and a part time dispatcher.

**c. Facilities and Equipment**

The Police Department is focused on obtaining equipment to improve officer safety and performance. The Department is currently assembling a mobile information system, which would give officers the ability to access data from local, state or national databases within cruisers. The effective use of equipment both maximizes efficiency and keeps capital costs down.

Litchfield police moved into their current facility when the new municipal complex was completed in 1997. The station at 2 Liberty Way occupies approximately 1/2 of Town Hall. Of the total 7,280 square feet of building area within Town Hall, about 47 percent, or 3,400 square feet are used by police. This figure includes half of the approximately 1,100 square feet representing the building entry, main foyer/waiting area, 50-person meeting room and public restroom. The police dispatcher, all other offices, detainment areas, lockers and storage are only accessible by entering a secure area just off the main foyer. Within this space, there are no unfinished parts of the building that are unserviceable or unusable. This area includes a reception/dispatching office; offices for staff; a men's and women's locker room; detention facilities; limited equipment storage and private restrooms.

The station constructed in 1997 is adequate to serve the existing population, but due to limited the fiscal resources the community decided to build the facility adequate to meet existing levels of demand under a short-range time horizon, rather than construct the facility

to provide space for all future residents projected at buildout. This decision was enhanced by reasoning that through careful building design, it would be possible to provide for additions to the facility in the future.

The new station represents an increase of 2,200 square feet from when services were located in the basement of the old Town Hall on Charles Bancroft Highway (Route 3A). As noted in the 1991 Master Plan, those facilities were inadequate for many reasons. Today the old Town Hall is used by the LPD for records and equipment storage, although there are security concerns and potential for damage due to moisture or fire. A summary of the total space for the Police is presented in Table IV-9.

**Table IV-9: Available Space in the Police/Rescue Building**

	Police Department (Square feet*)
Space prior to 1997 New Construction at 2 Liberty Way	1,200
Space Added At Liberty Way	3,400
Current Total	4,600

\*Approximate square feet of floor space.

Source: Litchfield Police Department, 1999 and NRPC 2000.

Currently the Department has five police cruisers, one of which is more than five years old. Regular equipment purchases for the Police Department includes the replacement of three cruisers every two years, as each year the Department logs extensive patrol miles. Other durable equipment possessed by the LPD an array of firearms, approximately 18 portable radios and 2 base station radios, and 5 radar apparatus.

**d. Activity History**

The Police Department maintains records of criminal activity and uses these statistics to establish or revise priorities. Table IV-10 shows that the total number of calls more than doubled from 1990 to 1996. Adjusted to a standard rate of activities per 1,000 residents there were 758 calls per 1,000 residents in 1990 and 1,420 calls per 1,000 residents in 1996.

**Table IV-10: Activity Level Per Full Time Officer**

Year	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999
Total Calls	4,183	3,635	4,055	6,977	8,432	9,564	9,292			
Assaults	30	-	-	38	-	-	25	-	-	63
M.V. Contacts	2,414	-	-	2,717	-	-	3,729			876*
Accidents (Motor Vehicle)	69	-	-	42	-	-	57	-	-	72
Crimes (Arrests)	233	-	-	208	-	-	220	-	-	285

\* Statistic changed to not include 'Warnings' which is estimated to represent 65-75% of all motor vehicle calls.

Source: Litchfield Annual Reports, as derived and standardized by NRPC, 2000.

**e. Facility Standards and Capital Development Priorities**

Table IV-11 estimates future staffing needs based on current employment statistics and projected population. Driven by population growth, the projected personnel needs will nearly double in the next ten years. Based on the current mix of full and part-time staff, the department could reasonably need space for nine additional officers by 2020. Should population projections hold, Litchfield may need to add between six and nine more officers

by 2010 to maintain the current level of service. This increment could be even higher if residents seek law enforcement comparable to communities like Hollis or Amherst.

**Table IV-11: Long Range Projection of Police Department Staffing Needs  
Full-Time Enforcement Employees & Law Officers Per 1,000 Population**

	Staff/ 1,000 Pop.	1990 Census	2000	Projections				
				2005	2010	2015	2020	20-Yr. Max.
Population Projection	-	5,516	7,360	8,856	9,674	10,749	11,785	11,675
Litchfield Uniformed Only (Full-time Only)	1.22	6.7	9.0	10.8	11.8	13.1	14.4	14.2
Litchfield Uniformed & Civilian (Full-time Only)	1.38	7.6	10.1	12.2	13.4	14.8	16.3	16.1
Litchfield Uniformed & Civilian Full-time Equivalent	2.22	12.2	16.4	19.7	21.5	23.9	26.2	26.0
NRPC Region Uniformed & Civilian (Full-time Only)	1.88	10.4	13.8	16.6	18.2	20.2	22.2	21.9
All New England Uniformed Only (Full-time Only)	2.0	11.0	14.7	17.7	19.3	21.5	23.6	23.4
All New England Uniformed & Civil. (Full-time Only)	2.6	14.3	19.1	23.0	25.2	27.9	30.6	30.3

**Source: Litchfield Police Department Staff Figures 1999; Uniform Crime report by U.S. Dept. of Justice, 1997.**

**OSP Population Projections, 1997; Litchfield Buildout Study, 1997.**

In 1990, there was approximately 0.2 ft<sup>2</sup> of police station per resident. Proposed Impact Fee Schedules by NRPC in 1992 listed an alternative standard for a new police station of 0.425 square feet per resident. With 5,516 residents in 1990, this translated into a 2,344 ft<sup>2</sup> station. With a Census 2000 population of 7,360 residents, using the 1992 standard the per capita demand for police station is 3,128 ft<sup>2</sup>. -This is evidence that the facility is at the basic level of service projected in 1992.

The 1991 Master Plan assumed that a useful ratio for the number of full-time personnel per 1,000 population was 1.60 for uniform and civilian police staff and 1.45 for uniformed staff only. It appears that the building was developed using a standard of 350 ft<sup>2</sup> per sworn officer, resulting in a total space requirement in 1996 of 3,319 ft<sup>2</sup>. However, considering that storage space is also used off site, these standards are probably too conservative to use in the future.

A problem is that the Police Department has undergone significant organizational change in recent years. A new Chief of Police has been hired. In addition, as the LPD utilized its facility, staff has identified deficiencies in the existing design. Furthermore, contemporary criminal justice methods have continued to evolve, usually resulting in demand for more space than was required in the past evidence processing, storage of evidence and specialized apparatus like radios, computers, and copy machines.

In an August 1999 memorandum, the Litchfield Police Department notes that the male locker room is cramped for existing personnel. Storage and garage space are also cited as limited in addition to the problem that some records storage is off-site in an area estimated as 1,200 ft<sup>2</sup>. Therefore, for this Master Plan the selected space standard is 425 ft<sup>2</sup> per one full-time sworn officer.

Since the facility is rapidly approaching capacity, it is projected by the LPD that an addition to the existing facility is needed within the next five years. A majority of this facility upgrade should be recoverable through impact fees. Furthermore, since the police cruiser fleet is

projected to double due to growth, it is reasonable to charge a one time capital cost for the purchase of three new police cruisers. The conservative estimate of the cost of three cruisers is approximately \$84-85, 000. This one time charge will be added to the cost to develop future fixed facilities to derive the total charge that can be recovered from impact fees.

Other equipment needs expressed by the Chief are:

- The potential upgrade of the radio system to the State Police system (in 2003 budget proposal); and
- Laptop computers for the police cruisers.

The following concluding recommendations are provided for police department operations:

- The Police Department should start interviewing architects may have interest in bidding for the job to upgrade the police station facilities.
- The LPD should investigate opportunities to collaborate with adjacent and regional communities to develop regional-level law enforcement facilities. With a relatively small department it may be inefficient to develop facilities such as crime labs, state-of the art storage facilities, fitness facilities or training areas. Exploring options now will help the Department and other municipal officials understand the pros and cons of alternatives.

## **C. LITCHFIELD PUBLIC WORKS**

### **1. LITCHFIELD HIGHWAY DEPARTMENT**

#### **a. Overall Program Description**

The Highway Department is responsible for building, paving, and maintaining Town roads in Litchfield. The transportation chapter provides extensive discussion of transportation facilities in the community. Generally, the quality of roads is good because a large part of the road network was constructed in the last 35 years. As these facilities age, the management of pavement and associated facilities will become more important. It is particularly important to monitor the need for facilities upgrades and maintenance prior to severe deterioration of pavement and other components because the expense to repair significant deterioration is far more costly than providing routine maintenance and upkeep to the same facilities when these are in good shape. To address this issue, Bedford Design Consultants was contracted to assist in the development of a road surface management plan. The consultant is assisting the Town in creating a 15-year plan for road improvements based on findings contained in the report. The serviceability and the cost of maintenance for a road within the initial 75 percent of a pavement's design life is less than one-fifth the cost of maintenance and reconstruction during the final 25 percent of the design life. The purpose of developing a pavement management system is to help the Highway Department determine when a road has reached that critical 75 percent point and to define repair strategies, aid in prioritizing repairs and provide information to facilitate the budgeting process.

#### **b. Personnel**

The Public Works Department employs two persons. The positions are listed in Table IV-12. The Road agent for the past twenty years recently resigned and a replacement will be elected in 2003. In addition to the paid Town staff, a consulting engineer provides contract-based technical support to the Highway Department and contractors provide road maintenance, such as snow plowing.

**Table IV-12: Public Works Personnel**

Position	Number
Road Agent	1
Secretary/Administrator	1
Heavy Duty Equipment Operator	.25
Part Time Driver	.25

**Source: Litchfield Road Agent, 2000.**

**c. Facilities & Equipment**

The Highway Department operates out of an office of approximately 1,000 ft<sup>2</sup> in the municipal building at Liberty Way and a large garage located on Incinerator Road. The adequacy of the current facility is in question. Vehicles parked outside will require replacement on a more frequent basis. Additional garage space is anticipated to be built at the same time, or as needed through the Capital Improvements Planning process. Vehicles and equipment owned by the Town and the anticipated replacement dates are typically scheduled through the CIP process. It is recommended that a replacement program, including a capital reserve fund, be developed for Town-owned equipment and vehicles.

**d. Activity History**

The Highway department provides maintenance of roads and actively maintained public rights-of-way. In winter seasons, this may involve plowing and de-icing. In warmer weather, this may include cleaning, sweeping, vegetation management, and road restoration. For plowing, the community hires subcontractors.

**e. Facility Standards and Capital Development Priorities**

The following findings and recommendations are provided for Highway Department operations:

- A road maintenance plan was needed by the Town. Bedford Design Consultants was contracted by the Town/Highway Department to assist in the development of a road surface management plan. The consultant is assisting the Town in creating a 15-year plan for road improvements based on findings contained in the report. The serviceability and the cost of maintenance for a road within the initial 75 percent of a pavement's design life is less than one-fifth the cost of maintenance and reconstruction during the final 25 percent of the design life. The purpose of developing a pavement management system is to help the Highway Department determine when a road has reached that critical 75 percent point and to define repair strategies, aid in prioritizing repairs and provide information to facilitate the budgeting process. This plan should help identify maintenance needs prior to the point that capital deterioration occurs which is very costly to repair or replace.
- The completion of Albuquerque Avenue is a very high priority for the municipality. Development of this local road will reduce the wear on other roads as well as enhance operations of all other municipal departments.
- Initial investigations should occur by the Board of Selectmen regarding the opportunities and constraints of merging highway department functions with other public works types programs in a unified public works department.

## **2. SOLID WASTE & RECYCLING**

### **a. Overall Program Description**

Treatment and handling of residential solid waste is conducted at the Litchfield Incinerator and Recycling Program based at the solid waste facility on Incinerator Drive. Operations are supervised by the Selectmen and day-to-day operations are conducted by a Facility Superintendent. A 20-year solid waste management plan, required by State law, was completed in 1990 by the municipality and approved by the State in 1991. The plan serves as the basis for future community waste management.

Operation of the facility is funded through taxes. Impact fees are not collected to aid solid waste facilities development. Hours of operation cover 25 hours per week on Wednesdays, Thursday, Friday, Saturday and Sunday. Town residents who use the facility bring their waste to the facility. After separation, non-recyclable, non-hazardous materials are incinerated with the exclusion of construction wastes which are sent to a landfill via a transfer station in Derry. The resulting ash from incineration is stockpiled and routinely transported off-site for disposal in an Environmental Protection Agency (EPA) approved landfill. The transfer station operation also separates household trash from brush, leaves and grass clippings. A fee is paid by the Town for the disposal of white goods (refrigerators, stoves, air conditioners, etc.) and automotive tires. The only hazardous materials accepted at the transfer station are batteries and fluorescent bulbs – these are products prohibited from incineration due to mercury content.

Non-residential development does not have access to the incinerator; therefore, these businesses contract private haulers for waste collection. In addition, it is estimated that more than a quarter of residences contract with private haulers for solid waste collection, opting out of the opportunity to use the full range of services provided at the facility.

### **b. Personnel**

The facility superintendent and five other part-time employees staff operations, with an estimated full-time equivalent of three employees. All staff are licensed incinerator operators and receive some specialized training. The Superintendent has Hazardous Waste Operator (HAZWOPPER) certification in the handling and transport of hazardous materials.

### **c. Facilities & Equipment**

The site of the incinerator and recycling operations is a 35-acre Town owned parcel on Hillcrest Road. Operations takes place where an open burning pit was once located. Approximately ten percent of the site is developed, with the remainder providing a forested buffer from adjacent residential land uses. Currently, there is very little building development adjacent to the site. Table IV-13 provides an equipment inventory.

**Table IV-13: Equipment Inventory, Litchfield Solid Waste And Recycling Program**

Category	Additional Equipment Information	Notes
General	5x8 foot guard station	
	Front end loader model	
	1989 New Holland L-555 Front end loader	Scheduled for update in 1999/2000
Incinerator	57x69 foot building housing unit, stack and monitoring apparatus	
	One Consumat Incinerator; Model C-550AIH	Used Equipment Obtained July 1999
	Bay for storage of incinerator ash (dimensions?)	
Recycling	35x55 foot building	
	Collection Station/Bin for Ceramics, light bulbs and batteries	Household batteries transferred to NRSWMP HHW Collection
	3 below ground (9 foot x 18 x 9) glass recycling bins	
	1 wet cell battery collection station	
	1 roll off bin	

**Source: Litchfield Incinerator Superintendent, 1999**

**d. Activity History -- Waste Collection and Recycling Program**

In 1998 a total of 2,014 tons of waste and recycling materials were collected prior to incineration. The solid waste and recycling figures are presented for the last three years in Table IV-14. Based on the following equation, approximately 1.61 pounds of waste is generated per capita per day based on the following equation:

$$((2,014 \text{ Tons} \times 2000\text{lbs/ton}) \div 1998 \text{ Population of } 6,844) \div 365 \text{ days} = 1.61 \text{ lbs. waste per capita.}$$

Current recycling efforts remove approximately 45 percent of total waste volume by weight (see Table IV-14 based on the weight of ash derived from incineration and the weight of materials source separated for recycling, excluding tires and car batteries which are tracked by counts rather than by weight. The recycling center currently separates the following materials: newspapers and magazines, corrugated cardboard, commingled glass (glass,) scrap metal, iron cans, aluminum cans, and clothes.

**Table IV-14: Litchfield Solid Waste And Recycling Figures**

Material	Tonnage per Year		
	1996	1997	1998
Paper (newspaper and magazines)	135	164	1,069
Cardboard	60	80	110
Scrap Metal	96	110	136
Steel Cans	22	25	34
Aluminum Cans	5	6	9
Glass	96	110	140
Demolition Materials	296	300	324
Recycling Sub-total	710	795	936
Waste Collected for Incineration	904	972	1,078
Ash Derived from Incinerator (after burn)	120	129	133
Total (Not Including Ash)	1,614	1,767	2,014

**Note: Recycling tons include construction materials sent for processing and disposal in a construction waste landfill. Ash to material ratios derived from ash and collection figures from 1998. 1996 & 97 solid waste mass prior to incineration not available.**

**Source: Litchfield Incinerator Superintendent, 1999**

Table IV-15 shows that the volume of trash collected and the recycling rate has increased each year since 1996. As population grows, so too will the amount of solid waste produced, unless individual households practice waste minimization and the community expands its recycling offerings.

**Table IV-15: Litchfield Solid Waste and Recycling Rates**

Year	Total Tonnage	Recycling Tonnage	Recycling Rate
1998	2,014	935.5	46.4%
1997	1,767	794.7	45.0%
1996	1,614	709.5	44.0%

**Source: Litchfield Incinerator Superintendent, 1999**

**e. Facility Standards and Capital Development Priorities**

Table IV-16 forecasts future solid waste volume based on the overall generation rate of 1.61 pounds/person/day. If this rate holds true, assuming the buildout population is 11,675, Litchfield would generate an average of over nine tons of solid waste per day by the year 2020 with a total estimated annual solid waste production of 3,430 tons. Currently, solid waste officials foresee no capacity constraints with regard to solid waste collection and processing. The incinerator burner was recently upgraded and the Superintendent estimates that the current capacity could accommodate 3,000 or 4,000 additional residents; however, limited hours of operation and the need for temporary storage in the case of equipment malfunction may be limiting factors. In 1999, problems occurred in handling a large surge in waste volume after the facility was closed for holidays.

**Table IV-16: Litchfield Solid Waste Collection Projections  
Assuming A Generation Rate of 1.61 Lbs.Per Person Per Day**

	2000	* 2010	* 2020
* Projected Population	7,360	9,674	11,675
Solid Waste Volumes Projections (tons/year)	2,163	2,842	3,430

Volume Projections = (population rate x 365 days)/(2,000 lbs./ton).

Source: Litchfield Incinerator, 1996 OSP Population Projections; Town of Litchfield Buildout Study, 1997.

**f. Findings and Recommendations**

Recent investment in the future operation of the incinerator has included the upgrade of the burner and training for facility staff. While the apparatus is sound, it is likely that the public could perceive risks from waste incineration. The public health risk from such a facility is more than likely quite low; however, the Selectmen should take a proactive stance on this potential problem by actively committing to maintaining the highest quality and most effective operation of this apparatus.

Still need to discuss issues and opportunities presented in the Nashua Region Solid Waste Management Plan (1993) and the New Hampshire Solid Waste Management Plan (1993).

The Clean Air Act provides control standards that limit the emissions of Municipal Waste Incinerators (MWIs). Careful air emissions monitoring should occur to ensure that the facility is maintained in compliance with applicable health standards. Instituting a high quality emissions monitoring and control program requires specially trained staff, computers, and the probes and sensors used to detect emissions. Currently the Town's consulting engineer provides assistance with emissions monitoring. The Selectmen should work with its consultant to forecast whether any other emissions monitoring or control options are available that could enhance the operation of the facility. A qualified consultant would also be able to explain future regulatory deadlines that may impact facility operation. The advantage to identifying looming deadlines well ahead of time is that capital commitments could be phased over time to minimize the overall impact of upgrading the facility in the future.

Another incinerator operations option that the Selectmen and budget committee should jointly explore is the potential to contract a private firm to maintain and operate the facility. This may provide a revenue stream for the municipality, reduce Town liability, and place responsibility for operations with a qualified contractor who specializes in incinerator operations. Private contractors may be able to help the facility achieve operating efficiencies that the Selectmen could not realize on their own. For example, there may be consultants willing to bid on contract to operate the facility who possess proprietary, patented technology. If innovative technology is available, this could possibly be used to maximize the operating efficiency of the facility.

Expanding the municipal commitment to recycling and increasing the rates of source separation by residents who generate potentially hazardous materials will help assure good quality operations of the incinerator. Current initiatives focus on eliminating toxic metals from wastestreams such as nickel, lead, cadmium, mercury and zinc. Investing in publicity and efforts to train citizens on what wastes contain toxic materials would reduce the likelihood of an upset in operations.

## **D. CEMETERIES**

### **1. Personnel, Facilities and Equipment**

There are three cemeteries in Litchfield: Community Church Cemetery, Hillcrest Cemetery, and Pinecrest Cemetery. Maintenance is provided by trust funds financed from burial plot purchases as well as supplemental funds appropriated by Town meeting. In the past, the public financial support for the cemeteries has been quite low. There is no staff at any facility; rather, contract services are procured for maintenance and burial assistance. Other characteristics of the three facilities are as follows:

- Community Church Cemetery -- This site located behind the Presbyterian Church on Route 3A does not contain any available space for burial plots. Gravestones here were salvaged from a flooded cemetery on the banks of the Merrimack River. One factor that may constrain this site from further development is the presence of wetlands.
- Hillcrest Cemetery -- This 2.8-acre site is surrounded by undeveloped land and some low-density residential development. Trustees very roughly estimate that this site may have 50 to 100 burial sites remaining.
- Pinecrest Cemetery -- This 6.3-acre site, owned by the Town, is adjacent to residential development, open space and recreation areas. Trustees estimate that this site has capacity for 300 more burials.

### **2. Activity History and Facility Standards**

Based on the interviews with cemetery officials in Litchfield it is estimated that the current demand for cemetery plots is roughly 10-13 plots per year. Given this rate of demand there is capacity for 20 years given the historical rates of demand for burial sites. Currently, cemetery plots are restricted to Litchfield residents only, which translates into low demand for plots. Furthermore, newer residents of the community may choose to be buried out-of-town or be cremated. If it is accurate to estimate that 40 percent of all burials/deaths per year result in cremations, this significantly increases the life of the cemetery as one grave may hold an unlimited number of cremations.

### **3. Findings and Recommendations**

Monitoring of demand for burial plots should be conducted every three years by the Planning Board to ascertain if there are any increases in the rate of demand for burial space within the community. One factor that could cause such change is the presence of a higher number of people within the elderly age categories than at any other prior time in the community's history.

The Planning Board should also work with the Cemetery Trustees, Selectmen, and Recreation Committee to explore the need to purchase or dedicate additional open land for future use as burial space. A potential role for the recreation committee comes from Amherst where approximately 50 acres are being developed into recreational fields, with the Cemetery Commission reserving the right to use Cemetery Field if and when other cemeteries become filled.

Another alternative that the Planning Board or Town leaders could explore as a substitute for cemetery space is a memorial tree program. Such a program could be structured so that a person could opt to have a memorial tree planted in a public place, such as in a public park or recreation field, in their memory. A constraint is that there is not a formal public works department or tree planting program that could provide staffing assistance to develop and administer such a program.

## **E. PUBLIC WATER SUPPLY**

Large portions of Litchfield are served by the Pennichuck Water Works (PWW) public utility. PWW service covers an area from the Robert's Road/Lance Avenue intersection, south and east down Albuquerque Avenue to Talent Road. Map IV-3, on the following page, shows the approximately 40 miles of mains in Litchfield serving over 1,200 residences (51% of dwellings) and which also supply water to the Town of Hudson. Litchfield water supply involves an interconnection of lines between Litchfield and Hudson, supported by three main wells. Water could also be conveyed to Litchfield from Nashua via Hudson. The Natural Resources chapter details the volumes generated by local wells. Water is typically exported from Litchfield to serve other communities in the PWW system. Overall, Litchfield consumes about 360,000 gallons per day, with an average household consumption of 250 gallons per day. Hudson recently was withdrawing approximately 12 million gallons per day from the Dame and Ducharme wells, but was recently restricted by the State of New Hampshire to 790,000 gallons per day. PWW reports no leaks or acute maintenance concerns with the current supply system. Generally, lines are in good working order, water quality is excellent, and Pennichuck has no capacity concerns.

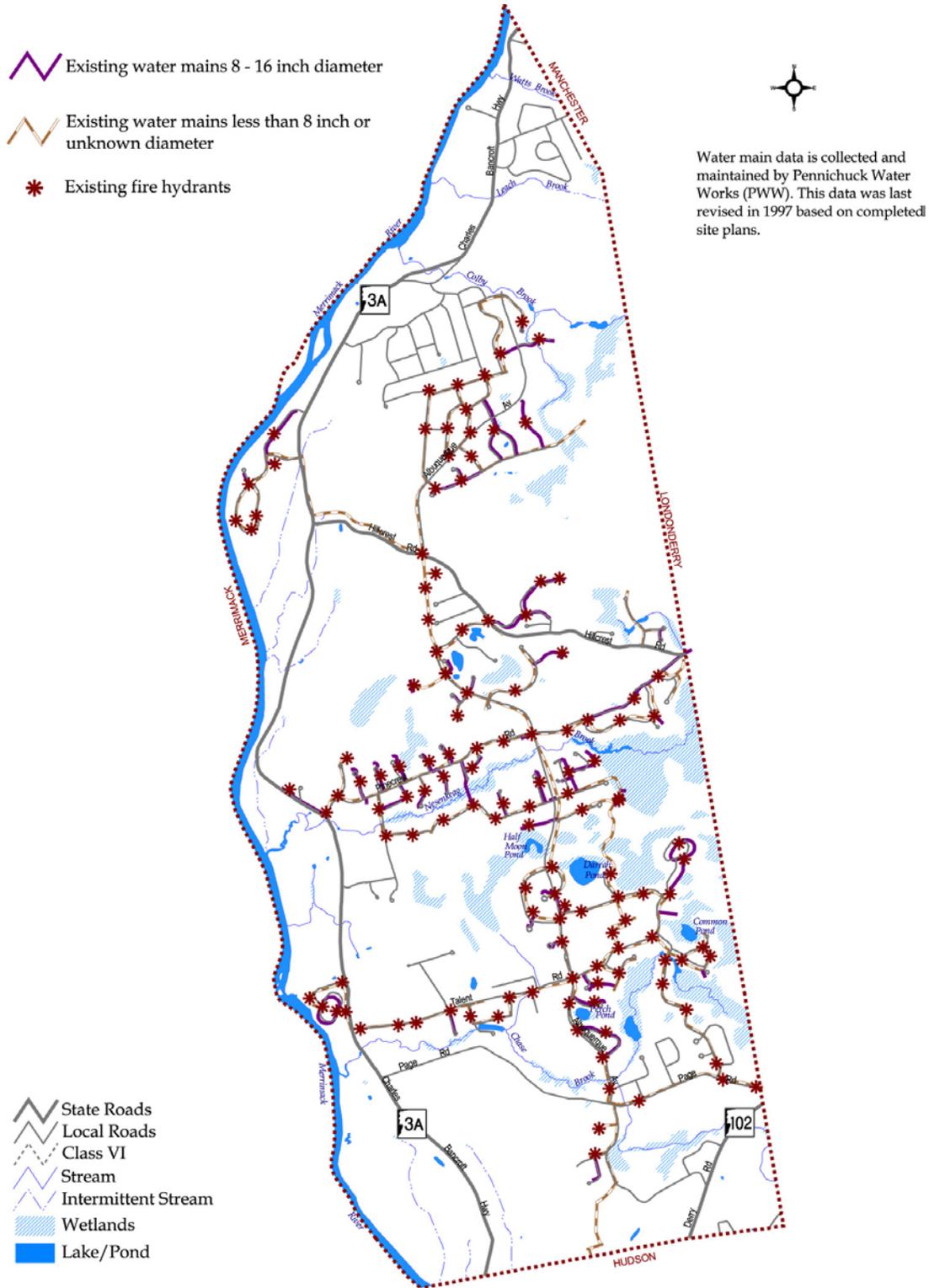
It is a local policy to require water line connections, where reasonably feasible, in new subdivisions and commercial developments. The main benefit of providing public water in new development is for fighting fires. PWW has the potential to service residential or non-residential customers whose premises abut public roads where the company has mains, although most properties currently served by the utility are within residential zoning districts. The highest density of connections is around Lance Avenue, including the Sawmill Brook area to the east, the eastern half of Hillcrest Road, and around Wood Way and Talent Road. The largest non-residential users in Litchfield are Pasconoway Golf Club on 3A. Additions to the public water service area either in permitting or construction are: 1) a connection that will extend lines northwest from Colby Road along Route 3A to the St. Francis Church and School and 2) an extension from Talent Road to new residential development in that vicinity.

Public expenditure is not used to finance water delivery. The utility is required to invest in facilities improvements that benefit ratepayers after approval from the Public Utilities commission. In Litchfield, the main wells are owned by Hudson and the utility provides that Town operating assistance on a contract basis.

The PWW has extensive capital improvement plans. To recover costs, the utility assesses developers fees associated with the cost of upgrading public water systems to supply new development, and users are also charged user fees. One problem is that the predecessor to PWW, the now defunct Consumer's Water Supply, did not invest in capital upkeep. This has created a considerable need to upgrade and modernize facilities. In 1999, the main pump station between Mallard Court and Wren Street received a comprehensive upgrade. This station moves water throughout Litchfield and over to standpipes in Hudson.

Generally, mains are in good condition because these are relatively new. However, one challenge is maintaining adequate water pressure in northern sections of Town due to higher elevations and the layout of the existing pipe network. In summer, the consumption rates are particularly high when there is a high incidence of residential lawn watering. Alternatives being investigated to enhance service in the north part of Town are: to provide water connections via Corning Road to Manchester, to provide a connection over the Airport Connector bridge over the Merrimack River, and/or to promote demand management for irrigation.

Map IV- 3: Existing Water Mains



One way that the local public sector is involved in public water supply is through the protection of important water supplies from contamination due to existing and future development. The Planning Board has a goal to protect local water supplies for future generations.

- The Planning Board should establish a policy of meeting routinely, such as every other year, with water company officials to gain mutual understanding of future capital needs and priorities, projects that are anticipated or a high priority by the utility and also to explore the relationships between the development of the water system and the optimal development of the community.

## **F. SEWER TREATMENT**

There is not currently fixed-line sewer utilities service in Litchfield. A sub-committee of the Planning Board in 1999 did discuss how the development of traditional sewer facilities, or other innovative wastewater treatment facilities, could potentially affect the economic development of non-residential zoning districts. This study does not specifically advocate for the development of public wastewater treatment; however, if the community does seek to evaluate the alternatives available, future steps should include:

- The Selectmen or other authorized representatives conducting discussions with abutting municipalities on the potential to develop regional facilities that provide parts of Town with sewer service.
- Evaluating the potential to develop smaller community or neighborhood-level systems, such as small package treatment plants, that serve a limited geographic areas, and which may be less costly to develop because of modular designs or the availability of grants. The advantage of this scale and type of facility is that the initial investments are usually relatively inexpensive.
- Performing engineering analysis to assess the scope and preliminary design of potential systems.
- Evaluating the potential to adopt tax increment financing (TIF) districts. Since the cost to develop sewer and wastewater treatment facilities is relatively high, TIF districts should be analyzed for adoption in commercial areas. TIFS are a special tax assessment tool where the particular developments benefiting from infrastructure such as sewers pays for facilities construction through an incremental property tax assessment. The advantage of this type of tax district is that incentive can be provided for business or industry that locate in the district and only users pay for the services provided.

## **G. TOWN CONSERVATION FACILITIES**

Many public parcels in Litchfield are dedicated to the preservation of natural resources, some of which have public access easements that provide for recreation. Discussed in the Recreation section is the need for trails throughout the community to provide for hiking, bicycling, cross-country skiing and walking. While the Recreation Committee should be principally responsible for implementing an interconnected local trail network, the Conservation Commission's collaboration could help identify the most important open space areas that should be linked to such a network. At the same time, to help achieve the preservation of open space, a conservation-oriented capital reserve should be developed since impact fees cannot be used for conservation in New Hampshire. Cost of community service studies consistently show that open space preservation enhances the fiscal stability of communities. The 2001 to 2006 CIP proposes an annual capital reserve allocation for the purchase of land, conservation or trail easements, or the purchase of development rights, such as to protect farmlands. This type of fund could provide a match to grants or low interest loans from the government or non-profit organizations.

Table IV-17 lists the current Town owned parcels of Conservation Land:

**Table IV-17: Town Owned Conservation Land**

Tax Map Number	Lot Number
1	78, 79, 92
2	43, 87, 105, 107, 109,110, 111, 120, 133
4	32
5	142
7	64, 119, 121
8	1, 2, 95
9	21
10	60
11	15, 101, 106, 107
12	14, 22, 23
13	23, 51, 54, 60, 70, 86
14	36, 49, 66, 67, 125
17	2, 4, 5, 10
18	79
19	77, 101, 132, 244
20	44, 46
22	10, 13, 23

- It is a goal of the Planning Board to work with other boards and committees to establish the financial mechanisms that enable open space and agricultural land conservation.

## **H. RECREATION COMMISSION**

The goal of the Litchfield Recreation Commission is to enhance the social and recreational opportunities available to residents. Recreation opportunities contribute to the physical, social and economic well being of the community. The Recreation Commission is currently working on a formal Recreation Plan. Completion is anticipated in Spring of 2003.

### **1. Overall Program Description, Personnel and Services**

Primarily through the efforts of volunteers, the Recreation Commission offers various activities for children, adults and seniors, including: field sports, water activities, day trips and theater. Although detailed statistics are not available, there have been increases in the number of services and events provided in recent years. Programs have included: a summer camp; after school programs; a Friday teen drop-in center; youth and adult basketball; comedy nights; teen dances; movies; concerts; skateboard demonstrations, caroling and lectures. In addition to it's programming, the Recreation Commission collaborates with scouting, the Litchfield Soccer League; Litchfield Little League; school groups and the library. For example, the Library Trustees and Recreation Commission jointly presented concerts in 1999. In addition to organized activities, the Recreation Commission has accelerated its efforts to provide routine and proactive maintenance of athletic fields and other recreational facilities at the same time that efforts occurred to develop new facilities.

The Recreation Commission is staffed by volunteers with the exception of Lifeguards, Camp Counselors, and field/facility maintenance contracted by a private firm. In 1999, summer camp was

provided by Girl's Inc. of Nashua. This collaboration was considered successful and a contract is being assessed for future years. Efforts have occurred to hire a recreation director; however, as discussed below, a formal recreation plan should be developed prior to hiring full-time, professional staff.

The Litchfield Community Profile in May 1998 by the University of New Hampshire Cooperative Extension Service discussed how to maintain a strong sense of community and bolster participation in local affairs. When asked to identify opportunities and constraints in the community, residents stressed the importance of recreational and social activities in Litchfield. By developing appropriate facilities, coordinating existing resources and providing publicity there was a belief that the community could foster more youth and resident involvement in local affairs. One option discussed in the forum was hiring a recreation director to help coordinate, maintain and develop local recreational programs. This was considered a high impact/low feasibility option for actual implementation; however, the Recreation Commission has continued to explore this option. At the same time, the Commission has been exploring how to sponsor programs through collaboration with regional non-profits such as Girls Inc. and the YMCA, with activities for pre-school children and teens as the primary focus of this initiative.

Generally, the summer camp and after school offerings serve the largest population. Historically, camp was run by volunteers with a small paid staff consisting of college-aged counselors. In 1999, the Recreation Commission entered a partnership with Girls, Inc. of Nashua to operate the camp. The regional non-profit delivered professional service, staffing and licensure that earlier volunteer-based efforts could not provide. The Recreation Commission reports a positive response from the parents of children who participated in this program. Actual participation rates vary in other programs provided by the Recreation Commission.

## **2. Recreational Facilities**

Table IV-18 lists recreation facilities in Litchfield. Roy Memorial Park, also known as Darrah Pond, is the most actively used facility and the site of the summer camp. It consists of a gym/auditorium/recreation center, known as Talent Hall, a beach, parking, athletic field and a skateboard park/basketball court. Other important facilities are: outdoor courts and fields at GMS and LMS; the Albuquerque Avenue bike path and a number of smaller parks. Since the last Master Plan, new facilities added to the local inventory include two baseball fields, two basketball courts, one soccer/football field, and one tennis court.

**Table IV-18: Active Recreation Facilities In Litchfield**

Site	Facility Offerings	Comments
Albuquerque Ave. Tennis Courts	2 regulation tennis courts	
Albuquerque Ave. Bike/Foot Path	2.2 miles paved path	ADA Accessible Additional segments constructed as Albuquerque is completed
Brickyard Road	1 Soccer field	
Campbell School	2 Soccer field (1 with sprinkler system), 2 Baseball fields, Gym, Basketball courts, Climbing wall, athletic track	90 ft. diamond (13 to adult) & 60ft. diamond (all ages softball w/ no mound)
Corning Road	Playground w/ swings & jungle gym, 2 Baseball fields.	60 ft. diamond (8-12 yr.) & 50 ft. diamond (5-8 yr.)
Litchfield Middle School	Soccer field Indoor gym/basketball court	
Jeff Lane	Playground with swings 1 multipurpose sports field	Horseshoe, volleyball, parking proposed for future
Griffin Memorial School	2 Baseball Fields, Soccer Field Indoor gym/basketball court Outdoor Basketball Hoops Concession Stand	60 ft. diamond (8-12 yr./LMS girls softball) & 90 ft. diamond (13 to adult)
Roy Memorial Park (Darrah Pond)	Recreation Center Building with: stage; basketball court; kitchen and restrooms. Picnic area Fishing Non-motorized boat access Skateboard/in-line skate park Parking for fitness trail 1 multipurpose sports field (with sprinkler) and concession stand Horseshoe pit, Ropes Course	Rec. center and field renovated 1997-1999 ADA Accessible Central access to Albuquerque Avenue bike/pedestrian path
Moore's Fall Conservation Area	Non-motorized boat access	Boat access constrained by distance
Parker (Brickyard) Park	Fishing, Nature Trail	Nature trail 2000, and picnic area proposed for 2003

**Source: Litchfield Recreation Commission**

### **3. Facility Standards**

Table IV-19 assesses the current need for athletic facilities using existing conditions, 1998 population and optimal State standards presented in New Hampshire Outdoors – The State Comprehensive Outdoor Recreation Plan (SCORP). This 1994 five-year plan provides the State’s official policy for outdoor recreation. The SCORP contains standards that enable comparison of recreation facilities in Litchfield with standards established for the State. The needs assessment provides guidelines for what the community should strive for based on other communities and professional recreation leaders’ opinions on future levels of recreation facilities demand. Comparing existing facilities inventory versus this hypothetical demand shows a need for additional playground area, hard courts (such as for basketball and tennis), boat access, athletic fields and tennis courts. The 1991 Master Plan made similar recommendations, which indicates that the community has had difficulty maintaining progress developing new facilities. One reason may be that the demand for recreational space per capita appears to have increased in the last decade.

**Table IV-19: Inventory Of Litchfield Recreation Facilities, 1999  
with Comparison of Local Need Based on Scorp Standards**

Recreation Facility	Site List/ Descriptions	Standard per 1,000 People	1998	Local
			Demand	Surplus/(deficiency)
Baseball Diamond	2 = GMS; 1/2=Jeff Lane Park; 1=Corning Road	1.10	7.53	(4.03)
Basketball Court	2=GMS; 1=LMS; 2=Roy Field	0.80	5.48	(0.48)
Boating Access	1=Moore's Fall; 1=Darrah Pond (Non-motor)	1.80	12.32	(10.32)
Campsites	25 rough estimate = Boy Scout Camp on 3A (Private nonprofit)	13.00	88.97	(63.97)
Football Fields	1/2= Brickyard Park;	0.10	0.68	(0.18)
Golf Courses	1=Passaconaway (Private nonprofit 18 holes); 2 Private driving range.	0.04	0.27	2.73
Gymnasiums	1=Darah Pond; 1=GMS; 1=LMS	0.25	1.71	1.46
Ice Hockey Rinks	-	0.05	0.34	(0.34)
Ice Skating Rinks		0.14	0.96	(0.96)
Picnic Tables	5=Town Park;	8.00	54.75	(47.0)
Community Parks (acres)	Brickyard; Corning; Jeff; Moore's Falls; State Forest; GMS; LMS;	6.00	41.06	(35.06)
Playgrounds (acres)	1=GMS; 1=Jeff Lane Park; 1=Brook/ Corning Roads Park.	0.50	3.42	(0.3)
Playgrounds (acres)	1=	2.00	13.69	
Skiing (X-Country)	-	0.10	0.68	(0.7)
Skiing (Downhill)	NA	0.09	0.62	NA
Soccer Fields	1/2= Brickyard Park; 1/2=Jeff Lane Park; 1/2=GMS; 1/2=LMS	0.16	1.10	1.0
Swimming (beach)	1=Darah Pond	0.50	3.42	(2.92)
Swimming Pool	-	0.14	0.96	(0.9)
Tennis Courts	2=Northern Albuquerque Ave.	0.95	6.50	(4.2)
Track	-	0.04	0.27	(0.3)
Trails, Hiking (miles)	0.25=Nesenkeag Brook by Talent Road/3A; 4.5 Albuquerque Avenue; 1.0 Moore's Falls; 0.25 = Brickyard;	2.20	15.06	(8.4)
Trails, Snowmobile (miles)	-	3.90	26.69	(26.69)

**Source: Litchfield Recreation Commission and NRPC; State Comprehensive Outdoor Recreation Plan (SCORP)**

The same SCORP demand standards are presented in Table IV-20 to derive a projection of future demand for recreation facilities in Litchfield based on OSP population projections. It is apparent from the table that a one-third increase in population will cause more demand for recreation facilities in the future. This provides evidence that a strategy is needed to help plan for future facilities development.

**Table IV-20: Projected Litchfield Recreation Needs  
Based on 1994 NH SCORP Recreation Facility Standards**

Recreation Facility	Standard per 1,000 People	Year					
		1996	2000	2005	2010	2015	2020
Population		6,540	7,360	8,856	9,674	10,749	11,785
Baseball Diamond	1.10	7.53	8.37	9.74	10.64	11.82	12.10
Basketball Court	0.80	5.48	6.09	7.08	7.74	8.60	8.80
Boating Access	1.80	12.32	13.70	15.94	17.41	19.35	19.80
Campsites	13.00	88.97	98.96	115.13	125.76	139.74	143.00
Football Fields	0.10	0.68	0.76	0.89	0.97	1.07	1.10
Golf Courses	0.04	0.27	0.30	0.35	0.39	0.43	0.44
Gymnasiums	0.25	1.71	1.90	2.21	2.42	2.69	2.75
Ice Hockey Rinks	0.05	0.34	0.38	0.44	0.48	0.54	0.55
Ice Skating Rinks	0.14	0.96	1.07	1.24	1.35	1.50	1.54
Picnic Tables	8.00	54.75	60.90	70.85	77.39	85.99	88.00
Community Parks	6.00	41.06	45.67	53.14	58.04	64.49	66.00
Playgrounds	0.50	3.42	3.81	4.43	4.84	5.37	5.50
Playgrounds (acres)	2.00	13.69	15.22	17.71	19.35	21.50	22.00
Skiing (X-Country)	0.10	0.68	0.76	0.89	0.97	1.07	1.10
Skiing (Downhill)	0.09	0.62	0.69	0.80	0.87	0.97	0.99
Soccer Fields	0.16	1.10	1.22	1.42	1.55	1.72	1.76
Swimming (beach)	0.50	3.42	3.81	4.43	4.84	5.37	5.50
Swimming Pool	0.14	0.96	1.07	1.24	1.35	1.50	1.54
Tennis Courts	0.95	6.50	7.23	8.41	9.19	10.21	10.45
Track	0.04	0.27	0.30	0.35	0.39	0.43	0.44
Trails, Hiking (miles)	2.20	15.06	16.75	19.48	21.28	23.65	24.20
Trails, Snowmobile (miles)	3.90	26.69	29.69	34.54	37.73	41.92	42.90

Source: OSP Population Estimates, 1998.

Recreation Guidelines taken from NH OSP, NH Outdoor Plan, 1994.

Using the analysis above, there are few recreational facilities that Litchfield is not projected to require by the time the community reaches 11,675. A hockey rink and an athletic track are two facilities where the community would probably not have demand for a whole unit. Similarly, while a cross-country ski area with lighting and groomed trails will likely be demanded when Litchfield's population reaches 11,675, the reality is that there is no such facility in the entire NRPC region. One alternative is to explore the potential to develop facilities jointly with another community such as Londonderry or Hudson. In the case of cross-country skiing, this type of need could be addressed in conjunction with development of local hiking trails, off-road motorized vehicle trails, and possibly a bicycle path network.

Table IV -21 presents a set of local recreation facility standards, typically less ambitious than the SCORP but more ambitious than the 1991 Master Plan, that the Planning Board proposes be followed to plan for future facilities development. These are future facilities where a portion of the development cost could be recouped through impact fees provided that the community deals with existing facility deficiencies in these same categories.

**Table IV-21: Local Recreation Facility Standards And Need Projections**

Recreation Facility	Litchfield Standard per 1,000 People	Future Demand 2000 to 2020	Estimated Unit Cost	Unit Type/ Label	New Facilities Cost
Baseball Diamond	0.95	3.22	\$24,600	per field	\$79,178
Basketball Court	0.75	2.54	\$23,000	per field	\$58,443
Community Parks	5.50	18.63	\$30,000	per acre	\$559,020
Playgrounds	0.35	1.19	\$30,000	per playground	\$35,574
Playgrounds	1.25	4.24	\$30,000	per acre	\$127,050
Soccer Fields	0.17	0.58	\$50,000	per field	\$28,798
Tennis Courts	0.85	2.88	\$45,000	per mile	\$129,591
Trails, Paved Biking	1.50	5.08	\$184,800	per mile	\$939,154
<b>TOTAL</b>					<b>\$1,956,807</b>

Source: NRPC 2000

Development of a comprehensive local trails network has been a Planning Board initiative for more than a decade. Trails are needed throughout the community to provide for hiking, biking, cross-country skiing and walking. The system should be planned to run along major arterials and connect important public facilities, including schools, parks, and concentrations of commercial and residential development. The system should be designed to provide access to the Merrimack River and it should connect the community with the adjacent region. One option that the Planning Board should investigate in detail is what combination of footpaths versus paved paths should be promoted to achieve optimal development of this system.

#### **4. Recommendations**

The acquisition and development of recreational facilities should consider the following:

- Develop a Formal Recreation Plan - Based on a demonstrated difficulty keeping up with the anticipated demand for athletic facilities, a recreation plan should be produced for the community. The plan would provide detailed comprehensive analysis and recommendations on how to plan, implement and manage recreational facilities over the next ten years.
- Provide Neighborhood Recreation Opportunities - During development review, the Planning Board should promote park dedications and public access to lands adjacent to new development. Examples of needs are: open fields, ball fields, picnic tables and trails. Neighborhood-level facilities enhance community development and provide play space close to home or work. These parks should not be substitutes for higher-order town-wide facilities.
- Develop High-Order Town-Wide Recreation Opportunities in a Central Location - Impact fees and exactions should be used to enhance and expand the Town's central facilities. Future growth will significantly increase the overall demand for recreational offerings.
- Merrimack River Access should feature prominently in local planning. The demand for boating, fishing, and pedestrian recreation will increase as the Town grows and water quality improves. River access is complementary to farmland and open space preservation, although careful planning should occur to ensure that the uses remain compatible.

- Provide Locally for Regional Recreation – Litchfield should explore how its recreation offerings influence the livability of the region overall. Developing local trails will help link Litchfield recreation enthusiasts with resources that extend outside of the community and will help foster types of recreation that extend across municipal boundaries.

## **I. AARON CUTLER MEMORIAL PUBLIC LIBRARY**

### **1. Overall Program Description, Personnel and Activities History**

Cutler Memorial Library is a local repository of books and information, including electronic databases, CDs, DVDs, videos, audiocassettes and CD-ROMs. It is also a cultural and architectural resource for the community. According to the 2001 Annual Report, the library had 3,689 patrons, 14,103 materials, and a circulation of 19,174 materials.

The staff, who work primarily part-time, consists of a Library Director/Children’s Librarian, Assistant Librarian, Library Assistant, Adult Services Librarian and Custodian. In addition to organizing events and programs, volunteers help with shelving books, shelfreading and other small projects such as craft preparation. Besides traditional lending, the Library Trustees have a goal to offer Internet to the public and complete automation of the libraries materials.

### **2. Facilities & Equipment**

Located just north of the Fire Station on NH 3A, the library was constructed in 1925 on a 1.7-acre parcel. The building consists of 2.5 floors totaling 2,700 ft<sup>2</sup>. The central location makes the library accessible to the community, but parking at the site is limited due to wetlands in the vicinity. In 2001, the facility housed 14,103 materials with 1,131 linear feet of shelving. The material acquisitions in 2001 were 781 materials.

The first major renovation to occur to this structure was a basement refinishing in 1999, which created the Florence C. Center Young Readers’ Room. Covering 700 square feet, this \$10,000 upgrade was funded by trust funds and impact fees. Work involved raising the floor, encasing lead-based paint, new carpeting, new shelving and furniture refinishing. The downstairs renovations enhanced other services by enabling reorganization of adult collections upstairs, creating a workroom from storage and opening up the main floor. Handicapped access was added in 2002, with the addition a handicapped accessible lift and bathroom. Other improvements added were the addition of an emergency exit in the young readers’ room, repaving the parking lot and 24-hour book and video drop boxes.

### **3. Facility Standards and Capital Development Priorities**

Cutler Library has less extensive facilities than are recommended by local and national facility planning standards. For example, Table IV-22 compares the library with the space and collection guidelines recommended by the American Library Association (ALA). While services and facilities were expanded in recent years, compared with ALA Guidelines for Determining Minimum Space Requirements, it is apparent that the collection size and physical space is below that which is generally expected in communities of comparable size. Nor has the Library space reached the projected minimum square feet needed according to the 1992 Proposed Impact Fee Schedules for the Town. Furthermore, the 1998-2003 CIP notes that shelving is at capacity and there is limited staff workspace. As population grows, floor space and other systems will most likely become more constrained and the Library could be forced to limit its offerings due to severe space limitations.

**Table IV-22: Comparison to American Library Association (ALA) Guidelines**

	Existing Characteristics 2001	Recommended Facilities	Estimated Existing Facility Surplus/ Deficiencies 2001
Total Building Area (sq. ft.)	2,700	4,416	- 1,716
Magazines	29.0	73.6	- 39.0
Volumes	14,103	36,800	- 22,697
Volumes added annually	781	1,472	- 691
Linear Feet of Shelf	1,131	4,907	- 3,776
Staff	2.75	3.68	- 0.93

**Source: American Library Association Guidelines (ALA)**

When the guidelines in Table IV-23 are compared to the Office of State Planning population projections (see Table IV-20), it is evident that the current capacity of the library is inadequate to serve a future population that could increase by more than 4,000 persons.

**Table IV-23: Projected Library Needs**

Year	Projected Population	Total Building Area (sq. ft.)	Staff Needed	Volumes	Linear Feet Shelf Space
2000	7,360	4,416	3.7	36,800	4,907
2005	8,856	5,314	4.4	44,280	5,904
2010	9,674	5,804	4.8	48,370	6,449
2015	10,749	6,449	5.4	53,745	7,166
2020	11,675	7,004	5.8	58,375	7,784

**Source: ALA Guidelines.**

Trustees have studied potential for expansion, but wetlands may inhibit the potential for a large facility upgrade at this site and have completed plans to purchase lands adjacent to the library. Another factor influencing an expansion at the current site is the unique architectural character of the building. Preserving historic features constrain the options available for renovations. In 2002, upgrade of the installation of a mechanical lift and an accessible bathroom was completed.

The library lists capital needs in the current CIP; however, it was a recommendation of the 1998-2003 CIP that any improvements in existing facilities include adequate provision for future expansion. It is also a recommendation of this study that the Trustees begin a long-range capital planning and maintenance program to assess needs and schedule potential projects such as: septic upgrade; roof and façade maintenance; and carpet replacement in high traffic areas.

#### **4. Findings and Recommendations**

Staff and volunteers should be commended for helping maintain and enhance the library; however, advance planning should occur in earnest to examine the different options available to enlarge the physical space in Litchfield Library in order to maintain the minimum levels of service as population growth occurs. One objective of the Library Trustees towards this end is to build shelving to higher levels in order to accommodate more book storage. Provided below are other additional actions that may help address deficiencies in library facilities.

#### **5. Recommendations**

- Expand Library Operations to Serve the Basic Needs of the Community -- Hire an architect to perform a detailed Master Plan for the library that covers historic preservation, expansion alternatives, and maintenance needs and priorities. There may be a need for a satellite facility or the selection of a new site that can accommodate a facility sized appropriate to the community population. Examples of needs are parking, offices, meeting rooms, bookshelves and storage.
- Provide Links Between the Library and Nearby Schools -- Explore the potential to link the library to a trail network so that students from the elementary and middle school may obtain safe non-motorized access to the library, such as after school.

### **J. PUBLIC SCHOOL SYSTEM**

Since a large segment of local expenditures involve school development and operations, attempts to accurately forecast future space needs, provide high quality institutions, and effectively and efficiently facilitate the use and development of school space is important to community planning and development. This section deals with the capacity of school facilities to accommodate and absorb existing and anticipated student enrollments.

#### **1. Overall Program Description**

The Litchfield School Board provides executive oversight of all schools and the Hudson and Litchfield School Administrative Unit (SAU) #27 provides professional staffing for day-to-day operations. The large and dynamic nature of the system is confirmed by the fact that total combined enrollment in SAU#27 would represent the fifth largest school system in New Hampshire, although Litchfield accounts for only about 1/3 of all students assisted by the SAU.

The Litchfield school system currently encompasses three buildings, including a new high school. The high school opened to limited enrollment of grade nine through ten in September 2000, the eleventh grade added in 2001, and 12<sup>th</sup> grade in 2002. Administration is provided out of the SAU office in Hudson. Until the high school is fully occupied in 2002, about one-third of high school students are receiving education through a cooperative agreement with Hudson at Alvirne High School and on a tuition basis at the Manchester School District. Overall, SAU figures list 1,441 students. Four years earlier enrollment of grades readiness through 12 was 1,296 according to the 1997 Litchfield Buildout Analysis.

## **2. Facilities and Equipment**

The Litchfield school facilities include:

- Griffin Memorial Elementary School (GMS) with ‘readiness’ through 4th grade;
- Litchfield Middle School (LMS) with grades 5 to 8; and
- Campbell High School, grades 9-12.

An overwhelming concern is the availability of an adequate supply of school space. As discussed in the Population and Housing chapter, Litchfield experienced rapid growth in recent decades. For example, there was 40% population growth from 1980 to 1990. By 2020, the Office of State Planning projects that Litchfield population will increase to 11,785. As population increased, there have been corresponding jumps in demand for school services. The result is extensive efforts to coordinate the optimal use of classrooms, core space (libraries, gymnasium cafeteria, etc.), and ancillary space such as storage, operations and administration. There also has been extensive analysis of alternative space arrangements for schools and the designs of new facilities to ensure that State and local standards are achieved and designs are flexible enough to enable the modification and rearrangement of building space with changing conditions.

The elementary and middle schools are currently at capacity based on a 1998 report by the Litchfield School Building Committee. Table IV-24 illustrates the optimal number of students for these facilities compared with 1999/2000 enrollments. The new High School is also provided.

**Table IV-24: Comparison of Enrollment and Building Capacity**

School	Optimum Enrollment	Enrollment As of (10/01/01)	Percent of Optimum Enrollment
Griffin Memorial Elementary School	500	551	110.2%
Litchfield Middle School	500	560	112.0%
Campbell High School	550	428	77.8%

**Source: Litchfield School Building Committee August 1998 Report to School Board – Elementary School Space Evaluation  
Hudson-Litchfield SAU #27 September 1999 opening day enrollments.  
2001 Annual Town School District Report**

**Notes: Optimum enrollment is based on factors such as: number of classrooms; lunchroom size; student-teacher ratios, and others.**

### **a. Griffin Memorial School**

Located on Route 3A, GMS, houses readiness through grade 4. Enrollment for grades 1-4 as of 10/1/01 was 551 students. Total building area is 52,086 ft<sup>2</sup> with 18,999 ft<sup>2</sup> representing traditional classroom and the rest consisting of special education, core and ancillary space such as offices, the gymnasium and library.

Griffin Memorial Elementary School was originally constructed in 1930 and received at least six major renovations and facility upgrades since then, with the latest being Heating Ventilation and Air Conditioning (HVAC) improvements in 1997. Despite these renovations, conditions are still very cramped, and space is antiquated and poorly designed. The School Building Committee in 1998 noted that the cafeteria is crowded, restrooms are at capacity, and special education space is limited and demonstrates design deficiencies. The Assistant

Superintendent lists lack of storage as a persistent problem along with poorly performing building systems and no teachers' lounge.

The optimal capacity of Griffin Memorial School is 21 classrooms, leaving adequate space for offices, art music, Wilkins Extended Education Program, reading, Title I services, special education, and guidance. For the 1997/98 school year, programs above faced cramped conditions as space was made for 23 classrooms. With the use of 23 classrooms, class size guidelines were exceeded at every grade level and some rooms were not intended as classrooms, including the part of the original library and offices converted to classes. For the 1998/99 and 1999/2000 school years, 25 classrooms were used.

**b. Litchfield Middle School**

The LMS houses grades 5 through 8, with enrollment as of 10/1/01 of 560 students. LMS was originally constructed in 1986 on the rear of the GMS parcel. Nine additional classrooms were constructed in 1997. The total building area is 67,760 ft<sup>2</sup> with about 18,000 ft<sup>2</sup> of general classroom and the rest consisting of core facilities and specialty classrooms such as science labs, the gymnasium and library. Other space is represented in a cafetorium (combined cafeteria and auditorium), offices and special education. A \$3,850,000 bond to cover initial construction costs will be paid-off in 2003 and a \$1.26 Million bond to cover partial costs of the addition is scheduled for retirement in 2002. The building is generally in good shape, with no major structural problems and maintenance and upkeep performed regularly.

According to the August 1998 report of the School Building Committee, the optimal capacity of the Middle School is 21 classrooms with a core capacity of 500 students. For the 1997-98 school year, 20 classrooms were used. In 1999/2000 22 classrooms were used. Enrollment is at the design capacity with occupancy at 98 percent of optimal design. Space maximization, arrangement of schedules and putting music classes on wheels may enable slightly more capacity in coming years.

**c. Campbell High School**

Campbell High School is a state of the art facility with a central location enhanced by access to the bike path along Albuquerque Avenue.



Maximum classroom capacity of the new school is 550 students, with core space designed to accommodate a future addition, of up to 300 additional students. Enrollment as of 10/1/01 was 428 students, with the 12<sup>th</sup> grade now in the school.

The gross building area is 114,500 square feet. Non-classroom area is 41,000 square feet (35.8%); therefore, classrooms are 73,500 square feet (64.2%). Classrooms include gyms, locker rooms, music and science labs. Core space includes an auditorium with seating for 450 with a stage, lighting, sound equipment and a curtain. Using these figures, with an as-built maximum classroom capacity of 550 students, the classroom space standard is 133.6 square feet per student and the core space standard is 74.6 square feet per student equaling 208.2 total square feet per student. Since core space is designed to accommodate a future classroom expansion with a 300-student capacity, the long-term core space standard is 48.2 square feet per student. Using this adjusted figure, a long-term space standard for the school is 181.8 square feet per student.

An \$11,686,000 construction cost approved by the voters in 1999 includes site preparation, but did not include \$149,000 for architectural fees, of which \$7,183 was drawn from the school impact fee account. Construction cost also did not include the land assembly cost of \$300,000. The \$300,000 raised by putting GMS wetlands into a permanent conservation easement was allocated to purchase the Campbell parcel. Furnishings are \$1.4 Million, not including about \$400,000 for computer technology, which was the estimated cost of establishing computer technology for the high school. This means total construction cost is \$12,527,817 with furnishings and equipment representing 14.4%. A \$12,527,817 capital cost and 114,500 feet square equates to \$109.41 per ft<sup>2</sup>. Bond finance for construction was to be for 15 years. Thirty percent reimbursement for the construction loan principal is the State Department of Education contribution.

### **3. Enrollment Projections**

Enrollment in schools is dynamic and difficult to predict. Rapid growth in the community, including a demographic shift toward young families and larger single family residential structures may be factors that pushed the school system to capacity. The coming years may result in continued growth in student body population, even with the enactment of a growth management ordinance in 2000. This probably will result in slight reductions in the overall rate of student population increases over the next five years. Slower enrollment growth would provide much needed time plan for future space needs and address existing facility deficiencies.

As discussed in the Population and Housing chapter, Litchfield has a large segment of population in school age years compared with the NRPC Region and State. While the percentage of local school age population has declined over time, the absolute number of persons in this group is increasing as Table IV-25 illustrates. Based on New Hampshire Vital Statistics by the New Hampshire Office of Community and Public Health, between 1991 and 1996 there were 815 births from 1990 to 1996. If these figures accurately predict the survival rate for these age cohorts, the average birth rate of 116.4 births per year for the last six years appears to be significantly higher than the 87 births per year in the prior decade. A jump in the birthrate could be an indicator of potentially higher future enrollments, although many other indicators should be evaluated in conjunction with this statistic, including local migration rates, family size, number of new households, number of entering students and growth in the regional economy.

**Table IV-25: Student Age Population In Litchfield**

Year	Population Under 18	Population	Population % Under 19
1970	604	1,420	42.5%
1980	1,568	4,150	37.8%
1990	1,990	5,516	36.1%
2000	1,925*	7,360	26.2%

Source: US Decennial Census

\* 5-19 yrs. of age

The 1997 Buildout Analysis discusses the average number of students per residence. In 1996, there were an estimated 2,253 dwelling units. With 1,296 students, this translated to 0.575 students per residence. This is a blended student multiplier because it averages students for all dwelling unit types in Litchfield, including condominiums; duplexes; apartments; and manufactured housing. At the end of 1999, there were 1,441 students and 2,442 dwelling units, representing 0.5901 students per residence.

Other factors that cause difficulty in predicting demand for public school space is the lack of kindergarten in the region and the potential for change in the regional supply of private school facilities. Even though it is not mandated, kindergarten education is in high demand. If Kindergarten were implemented by the Town, this would translate into a greater facility space needs.

The proportion of student age residents that are not attending public schools was 10 percent based on the 1990 US Census. Along NH 3A in northern Litchfield Saint Francis of Assisi Parish has built a new school. In the process of relocation, St. Francis expanded its classrooms slightly. SAU 27 officials will now monitor if private school enrollments influence public school enrollment. State level discussions regarding potential for charter schools could also influence whether families opt for non-public schools in the future at a rate different than is being demonstrated currently.

Table IV-26 show the future estimated school enrollments based on a cohort survival analysis performed by SAU #27. This analysis uses the number of resident live births in the community from 1993 to 1997 along with survival ratios and migration statistics to predict the cumulative progression of students through each grade. It is noteworthy that for the 1999 school year the projection match the actual enrollment, with enrollment less than predicted; therefore, the School District is recalculating its forecasts. Not shown in the table is the fact that the most impact on enrollments is occurring in the lower grade levels.

**Table IV- 26: Estimated And Actual Enrollments By Litchfield Residents**

School Year	Estimate	Actual	Variation from Estimate
1999-00	1,621	1,441	180
2000-01	1,635	-	-
2001-02	1,642	-	-
2002-03	1,631	-	-

**Source: 1997 by Schoolhouse Consulting as revised by SAU 27 September 1999.**

An alternative prediction of future enrollment can be established using the student multiplier established above and the developable land area (DLA) in the community zoned for residential uses. Assuming development of a Spring 2000 DLA of 1,429 acres resulted in 1,021 units on 1.4 acre dry area parcels, there would be an estimated 602 future students using the 1999 multiplier of 0.5901. This figure confirms other analysis, which shows that the school-age population will grow substantially until buildout.

#### **4. Space Standards**

The Litchfield School Board adopted a local classroom standard of 1 teacher for 20 students per classroom in grades K to 3 and 25 students in grade 4 to 12. Litchfield, like most communities in the State, has a School District standard more restrictive than the minimum State standard. The New Hampshire Department of Education maximum standard is 25 students per class in grade 1 and 2 and 30 students per class in grades 3 and up. There is a State of New Hampshire minimum classroom size of 900 square feet, including the storage space directly attributed to that particular classroom.

#### **5. Proposed Space Solutions**

In recent years, numerous solutions to enrollment increases were studied including expanding existing schools, building new ones and reorganizing the grade levels accommodated within different facilities. The favorable vote of Town meeting in 1999 to construct a new high school will accommodate existing students for the near future. As has been noted above, the most pressing need now is for

additional facilities to accommodate the increasing enrollment in the elementary and middle school levels. A study committee for a new elementary school is in place.

Tentative solutions to expected overcrowding adopted by the school board in 2000 and yet to be voted on at the school district meeting calls for:

- Purchasing land and constructing a new elementary school in 2004; and
- Expanding Campbell High School classrooms at an unspecified future date, sometime after 2005.

In prior deliberations the School Board and School Building Committees have also discussed the potential to expand the Litchfield Middle School core facilities and classrooms. Pursuing construction limited to additions to existing schools might avoid the more expensive alternative of developing a new site and building a new school.

It is uncertain whether the school district will propose constructing kindergarten classrooms at a school in the future. If this option is pursued, the SAU may take advantage of a 75% State building aid plan available on a first come, first served basis, made possible by the New Hampshire legislature in 1997.

Future GMS capital needs highlighted in February 2000 by the Assistant Superintendent include: installation of sprinklers in 2002; installing a rooftop humidifier system in 2003 as well as replacing the boiler in the same year. Future LMS capital needs highlighted at the same point were: providing irrigation to playing fields in 2002, a replacement boiler in 2003, and possibly a roof replacement by 2006.

The 1998 Litchfield Community Profile Report by the University of New Hampshire Cooperative Extension discusses the vision for Litchfield articulated by the more than 40 residents who participated in the forum. The process presented an opportunity for citizens to discuss what they want Litchfield in the future, key issues impacting the future, and action steps to realize the future articulated. Schools figure prominently in Litchfield's future, in educating future residents as well as in improving sense of community.

## **K. TOWN HALL**

Most municipal administration occurs in the Town Hall at 2 Liberty Way, including the offices of the Selectmen, Building Department, Conservation Commission, Planning Board, Road Agent, Town Clerk, Tax Collector, and Zoning Board of Adjustment.

### **1. Facilities and Equipment**

Of the 7,280 square feet of building, 58.0 percent, or 3,880 square feet is used for general administration, with the remainder used by the Police. The Liberty Way facility was constructed in 1997 with part of the cost financed through impact fees. Subtracting 1998 reserve space of 454 square feet, an additional 2,040 square feet of space will be required to meet a buildout population of 11,675 using a facility standard of 0.6 square feet per capita.

The building consists of an entry, restroom, common area, and meeting room shared between the general administration and police. There are also two smaller meeting rooms, an alcove for public records research and various offices. The main meeting room of approximately 1,275 square feet is capable of seating 50 people and services various committees. Most offices are considered small and crowded. Two large offices have open floor plans where the space is shared and open to the noise and

traffic of the public and other staff. When meeting rooms are not being used for functions, these are often used by staff. There is not a state of the art computer system with networking at Liberty Way, although the building was wired with networking capacity when it was constructed. Space concerns notwithstanding, the new facility is an improvement over the old Town Hall, which was also small and antiquated.

Town Hall is located near the geographic center of the community and will be more accessible to all points in Town with the completion of Albuquerque Avenue. Since the facility was new construction in 1996 there is an appealing layout to the site that includes ample parking, full handicap accessibility, and potential for building expansion as the needs of the municipal administration change and expand. One alternative discussed by department heads is expanding existing administration at the site and bringing new functions there, including a central public safety facility.

One subject that has received limited attention over recent years is the future plans for the old Town Hall and fire department on Route 3A should the facilities become vacant due to the construction of more modern facilities. The Town Hall building is a defining feature of the community. It is recommended to form a building committee to discuss future needs and development on the Liberty Way site. The Building Committees should evaluate the reuse of Route 3A facilities, by performing building surveys and adaptive reuse studies to identify alternative future uses for these major capital assets.