

## I. INTRODUCTION TO THE MASTER PLAN

### Purpose

Updating Town Master Plan is an opportunity to undertake a comprehensive evaluation of the community's needs and desires pertaining to anticipated growth over the next fifteen years. The overall purpose of the Master Plan is to provide a framework for the future growth and development of the community. It is a consensus building, planning process which attempts to identify the guidelines for growth of the Town as preferred by the townspeople. The goal of this Master Planning process is to proactively chart a course identifying the desired future of the community. Hopefully, this comprehensive planning process will help preserve many of the facets New London townspeople cherish while accommodating the demands of new development.

Please refer to Map I-1 Base Map (Page 4) for the area within the Town of New London. One of the exciting additions to this update of the Master Plan is that for the first time the maps reproduced with the Master Plan are color Geographic Information System (GIS) Maps. These can be found throughout the Master Plan.

### Overall Growth Policy for New London

Continue to support and expand the strong community center pattern with residential uses on small lots clustered around the village core of commercial, community service uses and Colby-Sawyer College with outlying rural residential areas.

### Process Used to Update the Master Plan

The responsibility for preparing and adopting a Master Plan rests with the Planning Board under New Hampshire law. The Planning Board was assisted throughout this effort by community planning consultant Kenneth McWilliams with Kenneth B. McWilliams & Associates and the Upper Valley Lake Sunapee Regional Planning Commission. In an effort to broaden the base of input, understanding and support for the Master Plan, the Planning Board organized and conducted a Community Visioning Workshop in the fall of 2007 on a Friday evening and the following Saturday attended by about 120 participants. This was followed in 2008 with the crafting and administration of a Community Survey. Surveys were available to the public on-line and by mail. Completed surveys totaled 515.

For each chapter of the Master Plan update, a draft chapter was prepared for the Planning Board and interested citizens to review and critique. Following this review, the requested revisions were incorporated. After all the revised draft chapters were completed, another opportunity for public input was provided when the Planning Board organized and conducted a Public Forum to review and discuss the Land Use and Implementation Plans. The chapters were then assembled into an integrated document for the Planning Board's review after the necessary revisions from the Public Forum were incorporated. After the needed changes were made, a Public Hearing was conducted on the draft Master Plan. The Planning Board adopted the draft Master Plan at the conclusion of the public hearing subject to final revisions to accommodate public input received at the hearing. The final draft Master Plan was prepared for use in reproduction.

New London additional growth. New London must prepare to manage this impending growth. This master plan is a key component of the effort to plan and guide New London's future growth and development.

To start the Master Plan process, about fifty New Londoners enthusiastically participated in the first of four Master Plan Workshops on Friday evening, October 12, 2007. The purpose of the Workshops was to give the public an opportunity for input in helping to shape the New London's vision statement. Presentations were made at the Friday evening Workshop on what a Master Plan is and is not, highlights of the 1998 Master Plan implementation, New London and regional growth trends, and local examples of Smart Growth Principles. The population trends and figures presented Friday evening set the stage for the Saturday Workshop when the public was asked to share their hopes and concerns for New London as they planned for the future. In small, facilitated, break-out groups, the workshop participants were asked to work through three exercises together.

The first exercise required each break-out group to allocate future residential and commercial growth in town. Each break-out group identified where they thought the future residential growth would occur (estimated to be 380 additional homes) and what the type and density of that residential growth might be. The second component of the first exercise, required the groups to if there should be additional commercial growth and, if so, where. Options included no commercial growth, an additional 12 acres of commercial growth to keep pace with growth in New London's population, or an additional 24 acres of commercial growth to keep pace with growth in region's population. If the group supported additional commercial growth, they were asked to identify where it should be located in New London.

In a second exercise, groups were asked to identify what made New London special--the important community elements that New London should retain. They were also asked about their current and future concerns. Finally, participants were asked for good ideas they had seen used in other communities, ideas that might be studied and introduced successfully in New London.

In the third exercise, each break-out group was asked to identify future issues and concerns to constitute one or two Master Plan topics.

In the afternoon, large group session, each break-out group presented and discussed with the full group the results of their growth exercise and the issues their break-out group identified for the assigned Master Plan topics.

This Vision Statement reflects public input received during the October Workshops, as well as public comment on the Statement draft obtained at community meetings on December 1, 2007 and January 5, 2008.

### **Description of Planning Terms**

For the reader's benefit, some relatively new planning terms used in this Vision Statement are described below:

"Conservation Subdivision Design" is a land development approach that assesses and preserves a proposed subdivision's important natural resources and provides a network of interlinking open space with public trails with adjoining lands.

**TABLE III-4  
Summary of Subdivision Activity: 2001-2010**

Year	Total Approved Subdivision Applications	Total Approved Subdivided Lots
2001	0	0
2002	4	27
2003	6	32
2004	0	0
2005	1	2
2006	5	11
2007	7	20
2008	3	8
2009	2	18
2010	1	2
Total	29	120

Source: Planning Board Records

**TABLE III-5  
Summary of Building Permit Activity in New London: 2001-2010**

Year	Single Family Residential Dwelling	Two-Family Residential Dwelling	Multi-Family Residential Dwelling	Institutional	Commercial / Industrial
2001	15	0	0	1	3
2002	24	0	0	1	0
2003	31	0	0	1	0
2004	40	0	0	0	0
2005	19	0	0	0	0
2006	8	0	0	0	0
2007	7	0	0	0	1
2008	7	0	0	0	0
2009	3	2	0	1	0
2010	8	0	0	0	0
Total	162	2	0	4	4

Source: Board of Selectmen Records

### Existing Land Use Analysis

This section summarizes a mapping analysis to identify the current land uses in New London. This analysis is based on professional interpretation of aerial photography using a digital Geographic Information System (GIS). Consultants for the Town analyzed an aerial photo,

which was taken in 2003 and processed to be an accurate, to-scale map. This aerial photo is the basis of the following tables and summary information regarding existing land uses. As summarized in the prior section of this chapter there has been development and changes in land use since 2003, but these changes do not have a substantial impact on the conclusions of this analysis.

The GIS analysis for existing land use is summarized in Map III-1 (Page 17). The mapping interpretation of land uses included digitizing the shaded areas for the different observed land uses. Table III-6 (Page 13) summarizes the land uses identified in the aerial photo and the associated land area.

**TABLE III-6**  
**Summary of Existing Land Uses: 2003**

		Acres	% of Total Town Area
<b>Undeveloped</b>			
	Forest	9,396	57.7%
	Agriculture/Open Fields	641	3.9%
	Outdoor Use	275	1.7%
	Lakes & Ponds	2,028	12.5%
<b>Sub-Total Undeveloped</b>		<b>12,340</b>	<b>75.8%</b>
<b>Developed</b>			
	Residential	2,888.0	17.7%
	Commercial/Institutional	195	1.2%
	Transportation (ROW)	860	5.3%
<b>Sub-Total Developed</b>		<b>3,943</b>	<b>24.2%</b>
<b>Total</b>		<b>16,283</b>	<b>100%</b>

Source: GIS Mapping of 2003 Aerial Photography by Stewardship Technology

This analysis indicates undeveloped land and open space land uses predominate in New London. Such uses include land cover associated with forests, open fields, outdoor use, and identifiable water bodies. The Town is predominantly undeveloped or open space land (approximately 63% of the total area), excluding public facilities like roads and other transportation infrastructure.

Developed land, including roads and highways, accounts for approximately 24% of the total area in New London. Residential areas, typically single-family housing units on individual lots, account for nearly 18% of the land area. The Commercial and Institutional areas, which include Colby-Sawyer College, the downtown commercial districts, and municipal facilities, occupy less than 2% of the Town. Combined, the primary developed areas (residential, commercial, and institutional) account for nearly 20% of the Town. These are the predominant settlement areas accessible by most, if not all, Town residents and visitors. The existing mix of land uses help to form the image of New London as a rural community still dominated by forested hillsides and numerous lakes and ponds.

### Land Use Patterns

#### *Town Center Development*

In terms of overall development pattern, New London exhibits a strong community center pattern with residential uses on comparatively small lots clustered around the core commercial and community service district, or downtown. Continued growth in demand for commercial properties, along with carefully crafted land use regulations, has resulted in a well-defined commercial core in the downtown where the Town has experienced commercial infill development and conversion of residential uses to commercial uses.

#### *Colby-Sawyer College*

Colby-Sawyer College is an important institutional use that helps anchor the downtown area and has experienced steady increases in student enrollment numbers since the 1980s. Increases in enrollment are expected for the next decade or more until it reaches 1,300 students, according to College Administration. Colby-Sawyer continues to improve its facilities including recently completed projects: a student athletic center, new student dormitories, a new science center, new athletic fields and expanded parking.

#### *Residential Development*

New London has a strong residential component adjacent to the downtown commercial and institutional districts. One striking form of residential development in New London is its shoreline development. Historically, most of the lake shores in New London have developed with a relatively dense pattern of seasonal cottages. Regional Census data and anecdotal evidence indicate a trend in converting these seasonal cottages to year round residences through renovation work or demolition and new construction over the last 20 years.

Residential development patterns elsewhere in New London range from a typical single-family detached unit development pattern to multi-family developments and dormitories. The single-family residential development pattern consumes more land area and developers are having increasing difficulty finding suitable locations for single-family subdivisions. Conversely, the presence of a college and regional hospital secures New London's future as a hub for the younger and older segments of the population. These two segments tend to have very similar housing needs: small, inexpensive rental or condominium units situated within a short travel distance to services and institutions. New London's distinct commercial district with regionally significant institutions, good services, and a good infrastructure will continue to attract younger and older residents in the coming decade.

#### *Emerging Land Use Patterns*

Rural areas have gained access broadband communications, like high-speed internet, telephone, and cable television, in recent years. Such access to high-speed communications has enabled individuals to pursue home occupations and home businesses or to simply work from home. This allows for a higher potential for commercial development in rural areas that had not been economically viable before the advent of rural broadband communications. This potential will likely yield long-term benefits when the smaller home-based ventures grow to occupy commercial property.

Another emerging trend is residential development on hillsides and ridgelines. With relatively few remaining opportunities for development along the lake shores, developers are searching out sites with good views rather than waterfronts for new house lots.

## Future Development Considerations

Future development patterns in New London will depend as much upon the landscape and natural features as the local, state, and federal land use and environmental regulations. The future development considerations address the likely constraints to development as well as the factors influencing future build-out scenarios.

### Development Constraints

As with most New England towns, New London's landscape has a range of development constraints, or circumstances that prevent reasonable use for commercial or residential purposes. The following text summarizes a development constraint analysis illustrated in Map III-2 (Page 18), which is based on the presence of the following land characteristics:

**Surface waters and wetlands:** Surface waters and wetlands are regulated and cover a significant portion of the Town's total area (surface waters cover approximately 12.5%). Wetlands identified in this analysis are based on existing maps: the National Wetland Inventory Maps from the US Fish & Wildlife Service and the Natural Resource Conservation Service mapping of very poorly drained soils.

**Steep Slopes:** Steep slopes are considered development constraints in this analysis if the topography indicates areas with slopes in excess of 25%, or 1 foot of vertical rise for every 4 feet of horizontal run. Problems encountered by development on steep slopes include erosion and sedimentation issues during site construction, unsuitable conditions for on-site wastewater systems, and aesthetic disruption.

**Protected Lands:** Property protected for conservation either by easement or through fee simple ownership, based on 2003 data.

**Existing Development:** Existing developed areas based on the current land use map (Map III-1, Page 17) with the assumption that existing developed areas would remain unchanged. 

The non-shaded or hatched areas on Map III-2 (Page 18) are potentially developable.

### Build-Out Analysis

In 1994 the New London Planning Board conducted a build-out analysis – a planning tool intended to assess the full development potential of a community using the present land use regulations and infrastructure capacity. A build-out analysis provides generic information for decision makers to understand the scale and impact of a land use scenario. Since the initial study the New London Planning Board adopted changes to the Zoning Ordinance, which affected the analysis findings. These changes included allowable zoning density for residential lots.

Consultants for New London revised the full build-out estimates based on these changes to the Zoning Ordinance and determined the following results:

- The Town land area and regulations may accommodate up to 4,374 residential units. This is approximately 2,071 dwelling units more than the 2010 Census count of 2,303 dwelling units.
- The total population under full build-out conditions could reach 9,000, which is more than double the 2010 Census count of 4,397 persons.

### *Non-Residential Land Uses*

Public responses about non-residential development were directed toward encouraging commercial/industrial/institutional development that would meet community needs without a push to expand the commercial base in Town:

- New commercial development should focus on services and businesses with the least impact on the community character and landscape
- Maintain the existing commercial development centers – do not expand the commercial development to new areas in Town
- Avoid low-density commercial development near existing Interstate exits
- Develop regulations to allow alternative energy sources for businesses

### **Land Use Goals**

The Planning Board developed the following land use goals based on input received from several public meetings and results of the Community Survey:

1. To remain, over the next fifteen years, primarily a rural residential community with uncrowded and quiet living conditions, and a scenic and unpolluted natural environment;
2. To preserve, protect, improve and enhance the natural, agricultural, scenic, recreational, cultural, and historic resources and the desirable characteristics of the traditional northern New England land use settlement pattern (compact patterns of development are preferable to non-contiguous development and the spread of strip land use development along the public road system);
3. To maintain and improve the accessibility to and the economic viability of existing villages and to emphasize the importance of a “livable, walkable community” based on the development of a network of non-motorized pathways, trails, bike lanes and sidewalks enabling resident and visitors to enjoy pedestrian and bicycle access to the Town’s business centers and recreational assets;
4. To continue to serve as a sub-regional retail and service center, but not to expand in this capacity to serve a larger geographic area;
5. To ensure that the density, intensity, and siting of future development is consistent with the capacities of access, utilities and natural resource constraints to support such land use development;
6. To enhance New London’s ability to protect its fragile natural environment by:
  - a. preserving remaining farms, fields, and forests and encouraging best practices in their management;
  - b. protecting the scenic resources, natural beauty, and open space lands of New London, and;
  - c. encouraging attractive, consistent aesthetic qualities in the built environment.
7. To strengthen New London’s ability to protect its fragile natural environment by:
  - a. protecting hilltops, steep slopes, wetlands, shorelines and special natural or geologic features, including habitat for rare plant species;
  - b. continuing to provide and protect natural habitat for wildlife, including increased focus on threatened or endangered species; and

- c. preserving and protecting New London's water and air resources.
8. To improve New London's ability to integrate continuing pressures for growth with its commitment to preserving rural character and the environment by:
  - a. continuing its commitment to environmentally sound planning and zoning principles and practices;
  - b. maintaining and improving the Town's enforcement of zoning regulations;
  - c. encouraging greater citizen awareness of and participation in best practices of land conservation, including participation in Town initiatives and volunteer-based organizations promoting land and wildlife habitat conservation; and
  - d. developing the Town's trail system and other recreational resources in a manner that increases the public awareness of and access to our rural landscape and natural environment without compromising its sustainability.
9. To encourage the provision of a safe, adequate and affordable supply of all housing types for residents of all income levels and provide housing opportunities to attract a more balanced mix of resident age groups; and
10. To provide for the aesthetically pleasing development of the community and its environs.

### Recommendations

1. Examine rezoning those areas deemed viable for expanding the number of village size residential lots, particularly within Town sewer and Precinct water.
2. Consider accommodating housing needs in the village:
  - a. Rental units;
  - b. Housing over businesses in the Commercial District, and;
  - c. Conversion of large single family homes into multiple units.
3. Consider changes to the existing Commercial District boundaries and permitted commercial uses to meet New London's future needs.
4. Consider opportunities to provide for clean, non-polluting light industry or high-tech industry by Special Exception in areas served by Town sewer and Precinct water.
5. Consider site and building design guidelines for aesthetics.
6. Consider a gateway protection ordinance aimed at preserving the Town's scenic quality and rural character along roads leading into New London and around Interstate interchanges.
7. Consider developing an Aquifer Protection Overlay District to minimize potential pollution of aquifers.
8. Explore innovative land use practices to preserve New London's rural character, natural and historic resources.
9. Conduct a feasibility study to identify future Water and Sewer Service Areas and defining sewer line extension policies.

## Economics of Open Space Protection

As highlighted in the introduction, open space lands have many benefits to a community. One benefit of open spaces lands is ensuring a positive fiscal impact on the Town by enhancing property values and keeping property taxes down. The positive fiscal impact of open space lands such as working farms and forests have been demonstrated through Cost of Community Services Studies.

A Cost of Community Services (COCS) Study is a type of fiscal impact analysis that determines the fiscal impact of current land uses on a municipality's budget. A fiscal impact analysis is completed for a given year using all the revenues and expenses by line item of a community's budget. These are assigned proportionately to the Town's agricultural/open space lands, residential and commercial/industrial land use categories. COCS studies are a snapshot in time of costs versus revenues for each of these types of land use.

The result of a COCS study is generally a set of three ratios that represent the balance of revenues and expenditures for agricultural/open space, residential, and commercial/industrial lands. In simple terms, the researcher determines which municipal revenues are generated by each land use and allocates that revenue to the appropriate category. Similarly, the researcher determines which municipal expenditures are demanded by each land use and allocates those expenditures to the appropriate category. Expenditures are divided by revenue to produce a final ratio. For example, a ratio of 1.03 means that for every one dollar of revenue allocated to a particular land use, 1.03 dollars of expenditures are allocated to that land use. Typically, the study will report one ratio each for agricultural/open space land, residential land, and commercial/industrial land.

As of late 2004, thirteen New Hampshire communities had completed COCS studies. In every town, agricultural/open space lands paid more in taxes than the cost of services it required resulting in a positive fiscal impact on the community. The average ratio for agricultural/open space lands was about 0.50 for these thirteen communities meaning expenses were only one-half the revenues for this land use category. As concluded by Frank Mitchell, land and water conservation specialist with UNH Cooperative Extension: "The data clearly show that working farms and forests and undeveloped natural areas bring in more revenue to a town than the land requires in services, and that conserving these lands can slow property tax increase in the long run."

## Inventory of Important Open Space

New London's open space and conservation lands include not only forests and fields, but important wetlands, water bodies, and unusual geologic features. They include wildlife habitat and scenic resources such as scenic views and scenic roads. Additionally, the New London Conservation Commission has developed an extensive network of trails on public and private lands where owners have granted public access for such use. A detailed description of some of New London's most important open space lands and natural features can be found in Appendix C at the end of Master Plan. Some of these conserved open space lands established based on collaborative efforts between the Conservation Commission and the ASLPT. Locations are shown on Map IV-1: Natural Resources, Trails & Conservation Lands.

## Open Spaces Resources, Scenic Roads and Trails

### Open Fields and Agricultural Lands

Open space lands enhance the rural and small-town character of New London and provide scenic views that contribute to the quality of life in Town and to a visitor's aesthetic experience. Additionally, protection of farmlands will help preserve some prime agricultural soils which are becoming a scarce national, state and local resource with the continuing decline of agricultural land uses. The current use program in New Hampshire provides property owners the benefit of reduced property taxes on open space lands, but does not ensure long-term protection of these valuable resources. The purchase of conservation easements, development rights or fee simple acquisition of significant open space lands affords ongoing, long-term protection for these important resources.

Concerns about preservation of farmland in New London today are motivated not only by the aesthetic benefits provided by open space lands, but by the emerging demand for locally grown food and other products. Evidence of this emerging growth is indicated by increasing agricultural activities in our Town over the past decade.

In 2008, one farm alone tilled over 35 acres of open land for fruit and vegetable production. Several other properties provide substantial acreage for seasonal pasturing of beef cattle, dairy cattle, work horses, alpacas, and occasionally sheep and goats. In addition, over 100 acres of open fields are used for the commercial production of baled hay. On Burpee Hill Road alone there is a commercial greenhouse producing orchids, a Christmas tree plantation, several acres of wild high bush blueberries, a beef cattle farm and over 25 acres of baled hay production.

Open Fields in New London were inventoried by the Conservation Commission and are outlined in Appendix B of this chapter. As reflected in the table, there are only about 675 acres of open fields remaining in Town. This represents only 4.7% of the total land area in New London. This is less than half of the statewide average of 10% open lands in New Hampshire. Agricultural resources in New London are illustrated on Map IV-2 (Page 27).

### Wildlife Habitat

For most of our nation's history, wildlife resources have been bought, sold, traded or wasted away without any regard for, or knowledge of, how this myriad of creatures may ultimately benefit mankind. Short term human gains have invariably taken precedence over the long-term wildlife losses, especially at the local level. If we, as a community, hope to maintain the diversity of wildlife resources that we still enjoy, then we must begin to plan and ensure that future development proposals minimize the impact on wildlife habitat features that are essential to the wildlife populations that we hope to preserve.

The community has long recognized the importance of wetlands, but more from the perspective of protection of water quality and flood control purposes rather than protection of wildlife habitat. Wetlands have been isolated with development surrounding them as if they were islands when, in fact, they are only part of a complex mosaic of habitat features that support a wonderful diversity of wildlife.

To date, the only wildlife habitat feature which has been identified and mapped in New London is deer wintering areas or deer yards. This work, done by the New Hampshire Fish and Game Department, is illustrated on Map V-1 Natural Resources, Trails & Conservation Land.

manner that preserves the essential functions and values of these fragile resources. The existing stream and wetland map, adopted March 13, 2001, should be revised because it does not include certain significant streams and wetlands, and includes some that are questionable. In addition, the buffering methodology in the Town's existing wetlands overlay regulation scheme has encountered problems, in certain circumstances, that should be resolved. To accomplish these goals, the Planning Board has appointed a Wetland Subcommittee to study stream and wetland protection and make recommendations to the full Planning Board on the best approach to pursue. The Wetland Subcommittee should study the streams and wetlands in Town to define their functions and values and to develop a regulatory system based on that scientific analysis. As this limited science continues to evolve and improve, the Planning Board should continue to seek effective alternatives to protect these fragile environments. This should continue to include periodic consultation with wetland science professionals and a review of current statutes to ensure a scientifically practical and legally viable regulatory approach.

5. The Planning Board should continue to explore the use of innovative land use controls that can preserve and enhance rural character, agricultural resources, scenic resources, ridgelines and other natural and historic resources. Some alternatives to consider might include a mandatory Cluster or Planned Unit Development provision, Conservation Subdivision Design Standards that would preserve and enhance rural character, and environmental characteristics zoning, to name a few.
6. Provision of landscaped open space within the villages, particularly for commercial or multi-family residential developments, should continue to be a key design element when the Planning Board studies establishing building and site design guidelines.
7. The Town should document the decline in agricultural lands in Town since the 1940s through a series of maps. The Town should recognize and assist the efforts of citizens currently engaged in food production and agricultural activities. The Planning Board should consider crafting an agricultural overlay district aimed at preserving the Town's remaining agricultural resources and producing more locally grown food. The Town should consider appointing an Agricultural Commission to assist in these endeavors.
8. The Town should consider providing incentives for landowners:
  - a. to maintain their property as open space lands; and
  - b. to conserve these open space lands.
9. The Town should encourage additional access to and development of recreational trails for hiking, cross-country skiing, snowshoeing, bicycling, etc.
10. The Town should grant conservation easements on Town-owned lands that are the responsibility of the Conservation Commission.

The Town should vigilantly monitor and enforce the Town's land use and environmental regulations to achieve the Town's conservation goals. The Town should consider developing a fee structure for inspections related to enforcing land use and environmental regulations.

**TABLE V-5  
Floodplains in New London**

Watershed	Floodplain Area (Acres)
Watershed #1 Sugar R	143
Watershed #2 Warner R	87
Watershed #3 Blackwater R	87
Total	317

Source: Calculations based on FEMA Flood Hazard Boundary Map, which were mapped on the Geographic Information System.

#### *Withdrawal and Discharge for Surface Waters*

The State Water Management Bureau keeps records on surface water withdrawals or discharges which exceed 20,000 gallons per day. Based on the Bureau's records, there are two such users in New London: Lake Sunapee Country Club and the Town of New London sewage pumping station. The Lake Sunapee Country Club discharges into the Hunting Brook drainage. Discharge from the Town of New London sewage pumping station is carried via gravity and force mains to the Sunapee sewage treatment plant for treatment and discharge.

#### *Potential Surface Water Supplies*

Two areas of Town which currently are not served by the New London-Springfield Water System Precinct, but that may merit consideration for water service, are around Lake Sunapee and Pleasant Lake. These water bodies might also be used as water supplies for the relatively dense residential settlement on their shores. Use of water from either water body would require treatment and/or chlorination.

Both Little Lake Sunapee and Lake Sunapee are part of the Sugar River watershed. This watershed extends to Springfield, Sunapee, Goshen, and Newbury. Water quality data for Lake Sunapee is maintained by the Lake Sunapee Protective Association which is the oldest volunteer lake monitoring program in the state. Similar water quality data is gathered and maintained by the Protective Associations for Little Lake Sunapee, Pleasant Lake, Otter Pond and Messer Pond.

Around these lakes, the predominant land use is residential along the shorelines with forest use covering the majority of the watershed. Current zoning in these watersheds include: Agriculture and Rural Residential, Commercial, Conservation, Forest Conservation, Institutional, Institutional/Recreational, Hospital Institutional, and Residential Districts. Residential, recreational, agricultural and forestry uses permitted in the more rural areas could pose threats to water quality, including septic system effluent, erosion from improper site development, agricultural and forestry practices, agricultural runoff and salt and runoff from roads. In the more intensively zoned areas, it is fortunate that water and sewer service is available; however, erosion from improper site development, use of salt for road maintenance and runoff from roads can result in negative impacts to water quality. Current uses of the surface waters include drinking water for individual residences, recreation, and wildlife habitat.

The potential for development in the watershed is great. New London should continue to ensure that every development is undertaken with consideration given to the water quality

impacts, especially since most of these surface waters are Class A waters. Evidence already exists of phosphorous being generated from undeveloped land being converted to developed uses within the watersheds. Managing activities throughout the watershed such as fertilizing, salting roads, controlling erosion and handling on-site waste disposal are very important for the protection of the water quality. Further residential development is the most likely future use for most of the area in the watersheds. However, with the greater residential population base, commercial businesses will expand to serve that population growth. As long as businesses are served by public sewer and site development is carefully done, the impacts on these potential water supplies will be minimized. Where more intensive uses, such as restaurants, clothes cleaners, laundries and auto service and repair shops are permitted and are not served by sewer, attention should be given to disposal of effluents and their impact on water quality. The public should be educated about the potential adverse impacts of on-the-water uses, such as marinas and power boats, so that the whole lake community is protective of the lakes' water quality.

### **Groundwater Resources**

Water that is not exposed to the air is known as groundwater. The term "aquifer" describes water saturated earth materials from which a water supply can be obtained. There are three types of groundwater aquifers: stratified drift; till; and bedrock. The basic difference is that stratified drift and till aquifers are composed of unconsolidated glacial deposits (loose earth materials), while bedrock aquifers are solid rock. In stratified drift aquifers, the materials are sorted sand and gravel. In till aquifers, the materials are a gravel, sand, silt and clay mixture. In bedrock aquifers, the rock is fractured.

Unconsolidated materials are porous. Highly porous materials have more and larger spaces between individual particles. These aquifer deposits are capable of storing, transmitting and yielding larger volumes of water. Conversely, materials (like till) with fewer and smaller individual particles are not capable of storing, transmitting and yielding nearly as much groundwater.

The space between the earth material and in the bedrock fractures is where groundwater is stored. Being interconnected, groundwater is able to flow from one aquifer type to another. However, even though groundwater flow within a particular aquifer may be substantial, often the rate of a groundwater flow between aquifer types is limited. Therefore, each aquifer type is often treated as an individual supply source.

All aquifers have a three dimensional shape. As glacial deposits and rock formations often cover large areas, there may be considerable acreages involved. For example, underlying entire valley floors may be stratified drift aquifer deposits, much of the surrounding higher elevations may be till deposits, and bedrock may lay under both of these unconsolidated deposits. Depending on material type, an aquifer may be shallow to extremely deep. Glacial deposits may be less than ten to well over 100 feet deep, and aquifers of these materials may be generally described as deeper in the middle and shallower towards the edges.

Bedrock may vary in depth depending on formation type, but the usable portion may be well over a thousand feet deep. However, the deeper one drills, the fewer and smaller the fractures to store and transmit groundwater.

Due to factors like aquifer material type, porosity and depth of saturation, an aquifer can only yield certain amounts of groundwater. Considering this type of information, an assessment of

an aquifer's capability and importance as a water supply can be made. The higher the transmissivity of an aquifer, the more likely it will supply larger volumes of groundwater for longer periods.

Wells used by communities and private individuals draw groundwater from aquifers. Water users like a community or a commercial-industrial operation typically require large volumes of water. To supply this amount of water on a continual basis, the well must have a large yield capacity. Only certain aquifers with the right hydrogeological characteristics may yield this amount over a long period of time. On the other hand, the small-volume residential or commercial user may not need a large-volume well to supply its need. A small-volume domestic well will usually suffice and can be located most anywhere. However, when considering an aquifer's ability to supply water, the combined effect of very many or very high concentrations of individual wells pumping from the same aquifer may ultimately equal a large groundwater withdrawal and, therefore, be beyond the aquifer's yield capacity. In addition, two large volume wells may have a localized negative impact on an aquifer unless well locations and pumping rates are regulated.

The water being pumped from existing or future wells comes from somewhere. As previously mentioned, the source is the precipitation falling from the sky and landing in the watershed. This water is commonly referred to as groundwater or aquifer recharge. Aquifer recharge may be differentiated into what is called direct and indirect recharge. Direct recharge is the water falling directly over an aquifer's surficial extent, which is not lost to plants, soil moisture, or evaporation and which makes its way down into the aquifer. The direct recharge areas for stratified drift and till aquifers are the respective glacial deposit's surface areas. Direct recharge for bedrock aquifers is basically the entire overlying watershed. Indirect recharge involves water that is direct recharge to till or bedrock aquifers, but moves through these aquifer areas and into stratified drift aquifers.

#### Stratified Drift Aquifers

Aquifers with medium or high storage capacities are shown on Map V-1 (Page 49) areas are found in association with large water bodies and two brooks in Town. The major aquifers shown on Map V-1 include the southeastern corner of Town, including the Low Plain area combined with the Blackwater River flowing out of Pleasant Lake, the inlet area to Pleasant Lake, Colby Point on Little Lake Sunapee, and the Soo Nipi Park area on the shore of Lake Sunapee.

The location and well log data for each individual well within the Town has been studied. For wells with a sand or gravel overburden, wells vary in depth from 33 feet to over 700 feet. Yields also range widely from less than a gallon per minute to 100 gallons per minute. Approximately 55% of the wells for which information is reported, have sand and/or gravel overburden. All of these wells draw water from bedrock. The source of water supply for the New London-Springfield Water System Precinct is now six gravel packed wells on Colby Point.

The only major discharge near a stratified drift aquifer is the irrigation water discharged by the Lake Sunapee Country Club into Hunting Brook which leads to the major aquifer to the southeast.

#### Bedrock and Till Aquifers

Water well completion report data shows that forty-five percent of the wells have a till, clay or mixed overburden. Depths range from 102 feet to over 800 feet. Yields range from less than a

The immediate watershed area for the Soo Nipi Park aquifer includes two zoning districts, R-2 and ARR. Agricultural and forestry uses, as well as residences, home businesses, and municipal and school buildings are permitted in this area. To the south in Newbury, there is a large area of rural residential district. In the Newbury rural residential district, residences, and agricultural enterprises and uses are permitted. Blodgett Landing activity most likely immediately impacts water quality in the Lake and does not affect the aquifer. Similarly, land uses in Sutton are at such a distance so as to not immediately affect the aquifer. Currently, single family homes and local and state roads are the major types of development. These pose threats to the aquifer from septic system effluent, toxics from home business, and salt and road runoff. Agricultural runoff and that from herbicide/pesticide use are potential threats.

The development in the aquifer area to the north of Pleasant Lake includes some single family homes. Water quality information is not available for this aquifer. The water from this aquifer is currently used for domestic purposes. The zoning districts, R-2 and Forest Conservation, allow more residential development, home business, agriculture, forestry and recreation uses in the aquifer area. Potential threats to water quality from these uses include septic system effluent, various hazardous materials from homes and businesses, salt and road runoff, agricultural runoff and herbicide/pesticides.

Existing development in the large aquifer located southeast of Pleasant Lake includes the village of Elkins which is principally residential use along with a few commercial establishments, forest and wetlands. Most of the area is zoned Residential or Agricultural & Rural Residential with the center of Elkins village zoned Commercial.

### Threats to Water Resources

Threats to water resources come from many sources and activities. Usually they are distinguished as point sources of pollution coming from a single point such as a pipe, or nonpoint sources of pollution such as storm water runoff.

#### Point Pollution Sources

There are no known point pollution sources in New London. Sewage from New London is disposed of in Sunapee at the wastewater treatment plant. There are several National Pollutant Discharge Elimination System (NPDES) permits in New London for active construction sites disturbing an acre or more. No one in New London holds groundwater discharge permits according to the NH Groundwater Protection Bureau.

Nonpoint sources of pollution are the biggest sources of pollution for our country's waterways. The Department of Environmental Services has compiled nonpoint pollution source information for every community in the State. Potential nonpoint pollution sources include:

Primary Groundwater Impacts	Primary Surface Water Impacts
Surface impoundments	Erosion
Manure storage facilities	Snow dumps
Industrial chemicals	Stormwater runoff
Municipal chemicals	Agricultural runoff
Septage disposal lagoons	Pesticide use
Subsurface disposal concentration	Hazardous waste
Junk yards	Salted roads
Landfills and dumps	Salt piles

monitored near the closed landfill. There have been occasional elevated levels of manganese and arsenic in some of the monitoring wells and surface water though none that have been connected back to the landfill and none have been particularly high or alarming. Since closure of the old landfill, the Town has twice experienced problems with slumping of the side slopes of the closed landfill in the 1990s and again in 2005 which have required stabilization. The most recent slump in 2005 occurred after heavy rains that exposed the plastic cover, but did not expose any trash. It was repaired in 2006-07. An abandoned septage disposal pit is located at the Town pit off Mountain Road. The old landfill and septage pit are in the Cascade Brook aquifer area. Solid waste is now taken to the transfer station and hauled to commercial landfills.

Snow clearing and dumping practices need to be carefully managed since there is a danger that this snow may contain accumulations of salt or petroleum products. Care should be taken that there is a buffer between snow dumping areas and the edge of the water resource to allow for filtering of these pollutants.

The sewerage lagoons which served the old sewer plant located off Pleasant Street still exist east of the old sewer plant. Water quality testing has shown that the lagoons are not adversely affecting the water quality in Lyon Brook. The Town is making plans to remove contaminants from the lagoons in 2010 or 2011. In the meantime, the Town needs to continue to monitor and properly manage these lagoons in order to ensure that they continue not to have a negative impact on the water quality in Lyon Brook.

The Waste Site Inventory, compiled by the Department of Environmental Services, reports that there are no known disposal sites for hazardous wastes, ash disposal, active septage disposal, sludge disposal or other sites noted in New London.

Residential development is anticipated throughout the Town. New or expanded retail and commercial activity is focused in the Commercial District on the Main Street and Newport Road areas. The Commercial District allows land uses which could be detrimental to water quality that warrant careful monitoring during the site plan review process.

As farming and forestry are permitted in most of the Town, care should be taken that best management practices are used so as to reduce the possibility of water contamination from pesticide, fertilizer and herbicide runoff, manure storage or feed lot areas or erosion from forestry activities.

The proper handling, collection and disposal of household hazardous waste are very important in protecting the quality of groundwater and surface water resources. The cost of organizing and conducting regular household hazardous waste collections is not nearly as costly as trying to clean up contaminated water resources.

The pollution from outboard powerboat engines is a concern for surface waters. Most of the outboard motors used today are two stroke engines which mix oil with the gas. These engines cannot be adjusted to obtain complete combustion and result in pollution of surface waters. Four stroke outboard motors are now available which do not mix oil and gas, obtain more complete combustion and, as a result, generate less pollution of surface waters.

#### Underground Storage Tanks

The New Hampshire Code of Administrative Rules Part Env-Wm 1401 sets forth the regulatory requirements which apply to the control of non-residential underground storage and handling of

The Town of New London may want to consider strengthening their groundwater protection regulations through the use of zoning. Propane is not a problem since it is stored above ground. The Town should prohibit any underground fuel oil storage tanks in environmentally sensitive areas mapped as potential aquifer zones or important recharge areas.

#### Existing and Future Land Use

New London village is the center for commercial, civic and institutional uses. Residences and home occupations and businesses are distributed along roads throughout the rural outlying parts of the community (see Map III-1, Page 17). The northern part of Town on the north side of Pleasant Lake adjacent to Wilmot is remote and less densely settled.

Existing land uses which present a threat to water quality are:

- dense concentrations of homes in aquifer areas; effluent loading could be too great and the filtering capability of the soil not adequate;
- stormwater runoff from land development activities including removal of the tree canopy and construction of roads and buildings;
- stormwater runoff from fertilizing lawns and golf courses;
- stormwater runoff from older commercial developments that do not conform with current Best Management Practices for stormwater management;
- leaking underground storage tanks associated with residences or businesses because of their age or construction;
- failure of old septic systems;
- unsound farming and horticultural practices may contaminate water by runoff from pesticides, fertilizers, and herbicides and by not using the Best Management Practices;
- unsound forestry practices may lead to contamination of water by not installing and managing the proper Best Management Practices for forestry;
- accidental spillage at shops and garages which perform machine and auto repair services can pollute water resources; and
- use of petroleum products on or near water bodies such as at marinas, in motor boats or at individual homes.

In addition to these existing uses, the zoning for the Town allows land uses which could be detrimental to water quality, especially in the village area. For example, filling stations, light industry, mortuary establishments and dense residential uses are permitted. Fortunately, the area is served by public sewer so most wastes are treated, but leaks (as with fuel tanks) and spills (as with toxics that are a necessary part of ordinary processes) can occur.

Future land use development anticipated over the next fifteen years includes:

- residential land use development will account for the major share of growth in developed land over this fifteen year period. A land use pattern which has the higher-density housing in close proximity to village centers served with water and sewer and the lower-density housing in the outlying areas of Town not served by sewer is encouraged;
- the most preferred locations for new commercial development are along Newport Road and in the Main Street area which correspond with areas or adjacent to areas currently developed and zoned for business development; and
- encourage the future commercial land use needs of the community to be accommodated by promoting the commercial center development concept rather than strip commercial development.

undertaken in areas, such as the shores of Pleasant Lake and Lake Sunapee. The Town may wish to change the zoning to lower the allowable density, or provide water and/or sewer service to handle the water quality problem, if there is one. The Town should continue to support household hazardous waste collection days and promote the idea of proper disposal of toxic substances. Also, many homeowners are not aware that septic tanks, if not regularly pumped, will cause leach field failure. The Town should help educate its residents about this important preventive maintenance practice. Additionally the Town should encourage the replacement of old septic systems before they fail and becomes sources of pollution adversely affecting both groundwater and surface water resources.

Business development – A variety of businesses are permitted in the Commercial Zone under the existing Zoning Regulations. The Town may wish to specify performance standards that each new business would have to meet to ensure continued water quality. It may be that the Town would want these standards to apply only in aquifer areas and aquifer recharge areas.

Stormwater runoff from impervious surfaces – Stormwater runoff generated by additional impervious surface coverage from new commercial developments creates the same problems discussed above for new residential developments. The Planning Board should be vigilant in implementing the LID techniques where feasible for stormwater management for new commercial developments. Additionally, the Planning Board should encourage the use of these new stormwater management techniques for older existing commercial developments and require their use when these older existing commercial developments are expanded or redeveloped.

Underground storage tanks – Underground storage tanks associated with residences or farms present real risks to water quality because of their age or construction. The Town may want to consider strengthening their groundwater protection regulations through the use of zoning. Propane is not a problem since it is stored above ground. The Town should prohibit any underground fuel oil storage tanks in environmentally sensitive areas mapped as potential aquifer zones or important recharge areas.

Unsound farming practices – Unsound farming practices may contaminate water by pesticide, fertilizer and herbicide runoff. The Town should consider appointing an Agricultural Commission to promote and encourage the proper use of best management practices for agriculture which may be accomplished by sponsoring educational workshops and making information available.

Unsound Forestry Practices – Tree cutting is managed by the State through intent to cut permits. Water may be contaminated as a result of erosion generated by careless forestry practices. The Town should encourage the use of best management practices for forestry through the intent to cut permits regulated by the State.

Shops and garages which perform machine and auto repair services – These uses are permitted in the Commercial District. Currently there is only one auto repair garage in New London. It is located in Elkins outside the Commercial District and is an existing nonconforming use. Accidental spillage can pollute water resources. The current practice of recycling motor oil helps minimize one possible pollutant from these businesses.

Household Hazardous Waste – The Town should continue to organize and conduct regular collections and disposal of household hazardous wastes.

Future uses – Residential development is anticipated throughout the Town with new or expanded commercial activity planned in the center of Town. The zoning for the Town allows land uses which could be detrimental to water quality, especially in the Commercial District. As farming and forestry are permitted in most of the Town, care should be taken that best management practices are used so as to reduce the possibility of water contamination from pesticide, fertilizer and herbicide runoff, manure storage or feed lot areas or erosion from careless forestry activities. As discussed above, regulatory changes and dissemination of information can minimize the threats to water quality.

The Town should pay particular attention to its aquifer areas. It is in these places where future development may threaten water resources which will be necessary to support the existing, as well as future development. If the aquifers are developed for use as a community water supply, land uses and existing activities in the watershed would have to be strictly regulated using suggestions like those recommended above. A water supply conservation district may be a necessary future amendment to the zoning ordinance to assure protection of new water supplies which use groundwater resources.

Groundwater Withdrawals – The cumulative effect on the long-term capacity of groundwater resources from the withdrawals by many small individual domestic wells is unknown and needs to be studied. The Town needs to begin to develop a database of well information.

Large groundwater withdrawals have the potential to deplete groundwater resources over time. In 1998, two State laws, the Groundwater Protection Act and the Safe Drinking Water Act, were amended to ensure that undesirable impacts to water resources from new large groundwater withdrawals are identified and addressed. Any groundwater withdrawal from a new well having a maximum withdrawal of 57,600 gallons per day or more is considered to be a large groundwater withdrawal. New London currently has no large groundwater withdrawals. Large groundwater withdrawals are managed by the NHDES. The applicant for any large groundwater withdrawal proposal must study its effect on the groundwater resource serving as the water supply and demonstrate the proposed withdrawal will not have a long-term negative impact.

Untreated Stormwater – Increasing frequency of severe storms are creating more and more untreated stormwater. In addition to using Best Management Practices, including LID techniques, the Town needs to investigate creating a stormwater utility to manage stormwater to address current stormwater generation and the predicted increase of stormwater runoff from the projected increased frequency of severe storms.

## **Issues**

### Non-regulatory Programs

Issues pertaining to non-regulatory approaches to water resource protection include the following:

1. A watershed study was completed for the Lake Sunapee watershed in June 2008 by the Sunapee Area Watershed Coalition (SAWC) entitled Management Plan for the Lake Sunapee Watershed. Watershed studies are needed for the other watersheds in New London. Education about the watershed approach to protecting water resources is needed.

6. The public needs access to information regarding appropriate rehabilitation techniques to encourage the appropriate renovation of older homes and buildings.
7. It is important that historic documents and photos be stored in a secure, fireproof and dust proof structure.
8. Early handwritten records should be reproduced. Copies need to be kept in more than one location.
9. All handwritten records should be transcribed into modern print, with annotations to explain early meaning of terms, interrelationships of people, place names, etc.
10. A nonprofit foundation to dispense monies at low interest from a revolving fund for the renovation of significant historic structures which may require rehabilitation standards owners could not afford may be needed.
11. The Town does not have a Heritage Commission. Heritage Commissions are established to recognize, use, and protect the resources, primarily man-made, that are valued for their historic, cultural, aesthetic, or community significance.
12. Gravestones in the Town's cemeteries, especially in the Old Main Street, Elkins and West Part Cemeteries continue to need repair and maintenance. These stones should be digitally photographed before they are lost forever. The digital photos should be stored with other Archives materials.
13. The location of grave sites outside the Town cemeteries and the location of Native American sites are not known.

## Recommendations

1. A complete historic survey for New London should be completed with information updated periodically to indicate changes to buildings, including remodeling, fire, demolition or changes to surroundings. The location of early mill sites, rock quarries, graveyards, cellar holes, and other valuable historic sites need to be mapped as part of the historic survey.
2. Historical interest should be promoted through:
  - a. photographs and murals in public and commercial buildings;
  - b. continuation of the marker program;
  - c. brochures describing the Town's history;
  - d. tours of historic structures and sites;
  - e. continuation of an oral history project; and
  - f. introduction of a local history course into the school curriculum.
3. The Town should continue to encourage the protection, enhancement and renovation of significant architectural and historic resources using the various tools and mechanisms available to them, as described in this chapter.

## VIII. POPULATION

### Introduction

An analysis of population trends and characteristics, and a projection of future population, is one of the most important elements of the master planning process. Any significant changes in the population will, consequently, affect land use patterns, the town's economic base, and local demand for housing, transportation, human services and community facilities. Awareness of shifts in the population composition is a prerequisite for planning; specifically, changes in the school age and senior populations could require corresponding reviews of educational, housing and service policies and provisions of new or expanded community facilities and services.

New London is a unique town, serving a diversity of constituents. Permanent residents, seasonal residents, students, commuters and visitors all contribute to the Town's lifeblood. This chapter concentrates on the populations of New London including permanent and seasonal residents, and the students of Colby-Sawyer College. This is done to reflect the full extent of demands placed on the Town. When possible, distinctions between resident and student populations are made to clarify the role that each plays in New London's history, present situation and future prospects.

Five facets of New London's population are examined here. First, a brief history of the Town and its population is presented, setting a context for discussion. Second, natural increase and migration patterns affecting New London's population growth are analyzed. Third, the age and sex distributions of the Town's population are examined. Fourth, a brief look at the seasonal population in Town is followed by a discussion of the student population at Colby-Sawyer College. Finally, population projections through the year 2020 for the Town are set forth, indicating the degree of change which may be expected.

Information for this report was derived from a variety of sources. The U.S. Census of Population and Housing provided most of the data. Publications from the New Hampshire Office of Energy and Planning (OEP) and the Upper Valley Lake Sunapee Regional Planning Commission (UVLSRPC), information from the Town of New London and student enrollment data from Colby-Sawyer College were supplementary sources of data.

### Historic Trends

New London's first residents were Penacook Indians, who lived off the fish and game of this mountain and lakes region. After the Revolutionary War, settlers, including many veterans, fled the congestion of Boston for the open territory of New London. In 1779, the Town was granted a charter. Sixteen families participated in New London's first town meeting, which was devoted to the issue of surveying and building roads. The influx of population after the Revolutionary War led to the development of civic and industrial services. At "Hominy Pot", at the foot of Clark Pond near the intersection of Old Main Street and Route 11, a number of mills were established. The first post office, store, meeting house and school were also located on Old Main Street near this "Hominy Pot" section, which was to remain the commercial center of New London for almost fifty years. The center's importance began to decrease in the 1830s, and a new commercial and residential center began to form around the newly built Baptist Church and New London Academy on Main Street. In the mid-19th Century, mills and other services were established at Otter Pond, by the foot of Pleasant Street Hill and at Elkins. By the turn of the century, farming was still the main source of income for New Londoners; the small industries

had declined, but replacing them was a lively summer tourist trade.

Attracted by the Town's first hotel built at Soo-Nipi Park on Lake Sunapee, large numbers of vacationers journeyed by carriage and steamship to enjoy New London's summer recreational and scenic amenities. Many visitors built seasonal homes in Town, stimulating the development of New London's commercial and service industries. Seasonal residents became a major source of population, as many summer visitors moved to the area permanently.

Colby Academy was established in 1837, and nearly a century later, in 1928, became Colby Junior College for Women. In 1975, the College added a four year bachelor degree program and changed its name to Colby-Sawyer, honoring its former president, H. Wesley Sawyer (1928-1955). In 1990-91, Colby-Sawyer College became a coeducational institution. Since the school's early days, Colby students have represented a significant portion of the town's population.

In the recent past, New London has developed into a small regional center for commercial, medical and other services. New London hosts a broad variety of small shops, businesses, inns and restaurants popular with both seasonal and permanent residents. Multiple children's programs entertain and educate area youth, while the Barn Playhouse summer theater continues to supply musicals and plays, as it has for over 50 years.

In 2008 the New London Hospital celebrated 90 years of service in New London. The New London Hospital was founded in 1918 and was first located in the Morgan House. In 1923 the hospital moved to a 12-bed building in the Griffith House. In 1958 a 25-bed hospital was built at the current County Road location. The William P. Clough Extended Care Center was opened in 1971. Eight years later in 1979 a new 4-bed Special Care Unit was added. A new wing was added to the Emergency Room in 1985. The Newport Health Care Center opened in 1991. The Grantham Family Care Center and the New London Pediatric Care Center opened in 2005. In 2007 the New London Hospital began the expansion project known as "Building Towards the Future".

Another important medical care facility based in New London is the Lake Sunapee Region Visiting Nurse Association (VNA). Since its founding in 1970, this not for profit organization has provided home health care, hospice and community services for individuals of all ages and income levels. In the fall of 2004, the VNA purchased and moved into its current facility located at 107 Newport Road. With a staff of 120 members and almost 100 active volunteers, the VNA provided more than 1,100 New London residents with services in 2007.

From a small agrarian community with a few mills in the early 1800s, New London has become, in 150 years, not only a college town, but an important year-round and seasonal residential community, as well as a small regional center offering goods and services for New London and the surrounding communities.

Table VIII-1 (Page 130) and Figure VIII-1 (Page 131), on the following pages present the historical trend of New London's population growth.

### New London Alternative Population Projections

Unfortunately, a totally accurate method of predicting the future population of small towns has not been devised; hence, the alternative projections. Any unexpected change, such as the addition of a large industry, institution, or housing development, can alter the projections considerably. One should, therefore, view these projections as a general guide that should be updated periodically as conditions change or new information is available.

As reflected in Table VIII-16 (Page 146) and Figure VIII-6 (Page 146), five alternative population projections are presented. The New Hampshire Office of Energy and Planning's projection is based on a computer model projecting the State's population and then breaking down this projection to the County and then Town level. This State computer method projects an annual growth rate of 1.28% for New London over the next fifteen years.

Four other linear or straight-line projections are presented based on past trends. One projection is based on the growth trend experienced in New London between 1980 and 2003, which equated to a compound annual growth rate of 1.75%. A second projection is presented based on the growth trend experienced in New London between 1970 and 2003, which was equivalent to an annual growth rate of 2.06%. The third projection presented is based on the 2.49% annual growth rate experienced by New London from 1990 to 2003. The final projection is based on the projection used by the Planning Board in the 1998 Master Plan which equates to an annual growth rate of 1.99% by adding 100 people per year. These alternative population projections would add between about 956 and 2,615 people between 2000 and 2020. An average of the four projections results in adding about 1,800 more people by 2020.

The passage of time will tell which projection was most accurate. Only time will tell. However, it's better to plan for the worst and hope for the best, than to do the opposite.

This is one of the major trends to monitor, since the growth in population has such a significant effect on the other elements of the Master Plan. If it changes significantly, then it should be used as an indicator that perhaps other parts of the Master Plan should be revisited.

The Planning Board believes there are some factors which, combined, will bring more growth than projected by the State computer method or straight-line projections:

1. The attractiveness of New London as a retirement community will continue to fuel the migration of retirees to New London. In addition to the tranquil and scenic natural environment, New London offers the recreational amenities, medical services, commercial facilities and cultural activities desirable in a retirement community.
2. The desirability of New London as a second or seasonal home market will continue over the next fifteen years. The tremendous numbers of the "baby-boomer" generation now maturing into a financial position to be able to afford a seasonal or second home should spur growth of this type of development in New London. Further down the road, it is anticipated that many of these new seasonal homes will be converted to year-round use for retirees as the "baby-boomer" generation ages, further fueling the population growth in year-round residents.
3. Another factor which is anticipated to affect future growth in the community is the desirability of New London as a work place for professionals, particularly those who want

Planning Board Community Survey 2008								
Question #1: Which of the following attributes do you think significantly contribute to making New London a desirable place to live and/or own property? (Please rate each attribute) <input type="checkbox"/>								
Answer Options	Very Significant	Significant	Neutral	Insignificant	Very Insignificant	Don't Know	Rating Average	Response Count
Village centers with New England charm	58.5% (300)	34.7% (178)	5.7% (29)	0.6% (3)	0.6% (3)	0.0% (0)	4.499025	513
Small town atmosphere with rural charm	63.5% (324)	31.6% (161)	4.3% (22)	0.2% (1)	0.4% (2)	0.0% (0)	4.57647	510
Scenic vistas of lakes, mountains & open spaces	72.8% (372)	25.0% (128)	1.6% (8)	0.2% (1)	0.2% (1)	0.2% (1)	4.694716	511
High visual quality of the built environment	44.5% (223)	38.9% (195)	13.0% (65)	2.0% (10)	0.8% (4)	0.8% (4)	4.219561	501
Good schools	51.5% (261)	28.8% (146)	16.0% (81)	0.4% (2)	1.0% (5)	2.4% (12)	4.22288	507
Friendly people with community spirit	49.7% (254)	40.3% (206)	8.4% (43)	0.8% (4)	0.6% (3)	0.2% (1)	4.37182	511
Availability of numerous outdoor recreational activities	43.5% (223)	42.7% (219)	10.3% (53)	2.3% (12)	0.8% (4)	0.4% (2)	4.245614	513
Availability of cultural & indoor recreational opportunities	29.2% (150)	44.6% (229)	18.3% (94)	5.7% (29)	1.6% (8)	0.6% (3)	3.925926	513
Convenient availability of commercial goods	21.5% (110)	40.9% (209)	27.6% (141)	7.4% (38)	2.2% (11)	0.4% (2)	3.710372	511
Convenient availability of professional services (health care, legal, etc.)	39.4% (201)	44.3% (226)	11.6% (59)	3.3% (17)	1.2% (6)	0.2% (1)	4.168627	510
Availability of a mix of housing types for all income levels	20.6% (105)	33.1% (169)	24.7% (126)	10.6% (54)	10.0% (51)	1.0% (5)	3.407843	510
Convenient access to the interstate highway system	23.1% (118)	42.1% (215)	24.3% (124)	7.4% (38)	2.3% (12)	0.8% (4)	3.737969	511
Employment opportunities	14.0% (71)	31.0% (157)	35.3% (179)	9.7% (49)	6.7% (34)	3.4% (17)	3.258383	507
Comments:								72
answered question								515
skipped question								0

Question #2: The housing related responses to Question #2 about how important people thought the following objectives are for planning for the future of New London over the next fifteen years received the two lowest responses. Combining the response categories of significant and very significant:

- continuing trend as a retirement community was the second lowest response (30.9%); and
- encouraging continued development of seasonal second homes was the lowest response (22%).

Planning Board Community Survey 2008								
Question #2: Please indicate how important you think each of the following objectives are for planning for the future of New London over the next fifteen years. (Please rate each objective) <input type="checkbox"/>								
Answer Options	Very Important	Important	Neutral	Unimportant	Very Unimportant	Don't Know	Rating Average	Response Count
Attracting a more balanced mix of resident age groups	31.6% (162)	36.9% (189)	20.1% (103)	6.3% (32)	4.9% (25)	0.2% (1)	3.835938	512
Encouraging continued development of seasonal,	3.7% (19)	19.3% (98)	37.5% (190)	26.2% (133)	13.2% (67)	0.0% (0)	2.741617	507
Continuing to function and expand as a regional	13.5% (69)	36.9% (189)	26.4% (135)	14.8% (76)	8.0% (41)	0.4% (2)	3.318359	512
Expanding commercial & professional services only	14.1% (72)	42.4% (216)	26.7% (136)	11.0% (56)	5.1% (26)	0.6% (3)	3.477407	509
Attracting more tourist-related businesses	7.1% (36)	24.3% (124)	39.6% (202)	19.8% (101)	9.2% (47)	0.0% (0)	3.001961	510
Continuing trend as a retirement community	5.5% (28)	25.4% (129)	42.9% (218)	16.3% (83)	9.1% (46)	0.8% (4)	2.996063	508
Attracting more outdoor recreation-related businesses	9.6% (48)	35.5% (177)	36.5% (182)	13.2% (66)	5.0% (25)	0.2% (1)	3.308617	499
Attracting clean, non-polluting light or high-tech	20.0% (102)	34.6% (176)	25.1% (128)	10.0% (51)	9.8% (50)	0.4% (2)	3.438114	509
Limiting commercial development	27.8% (142)	33.5% (171)	21.3% (109)	10.2% (52)	6.8% (35)	0.4% (2)	3.639922	511
Restricting industrial development	44.0% (224)	24.4% (124)	17.7% (90)	5.9% (30)	6.9% (35)	1.2% (6)	3.891945	509
Comments:								75
answered question								515
skipped question								0

Question #3: This question asked respondents their preference for the future pattern of residential development in Town. Combining the response categories of significant and very significant:

- the highest response received at 65.1% was to concentrate residential development within or adjacent to village centers with outlying areas remaining low density.

Planning Board Community Survey 2008								
Question # 3: What overall pattern of future residential development would you prefer to see in Town? (Please rate each pattern)								
Answer Options	Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree	Don't Know	Rating Average	Response Count
Concentrate residential development within or adjacent	30.9% (146)	34.2% (162)	17.1% (81)	12.7% (60)	4.2% (20)	0.8% (4)	3.723044	473
Scattered throughout Town	12.3% (58)	38.4% (181)	26.3% (124)	16.8% (79)	4.7% (22)	1.5% (7)	3.324841	471
Residential strip development along State and Town	1.5% (7)	5.8% (27)	22.5% (104)	37.8% (175)	29.6% (137)	2.8% (13)	2.034557	463
Spread evenly throughout Town, but not in visible,	14.5% (67)	42.8% (198)	21.8% (101)	13.4% (62)	5.6% (26)	1.9% (9)	3.412527	463
Focus residential development around lakes and ponds	1.3% (6)	5.1% (24)	17.9% (84)	35.0% (164)	39.5% (185)	1.1% (5)	1.903846	468
Comments:								45
<i>answered question</i>								<b>480</b>
<i>skipped question</i>								<b>35</b>

Question #12: This question was about workforce or affordable housing which is housing affordable to all income levels and generally applies to rent or mortgage, insurance and taxes being no more than 30% of a household's income. About two thirds (66%) of the people responding to the survey indicated they thought there was a need for workforce/affordable housing for people who work in New London.

Answer Options	Response Percent	Response Count
Yes	66.0%	301
No	18.0%	82
Don't know	16.0%	73
Comments:		80
<i>answered question</i>		<b>456</b>
<i>skipped question</i>		<b>59</b>

Question #13: This question asked respondents to identify their level of support for alternative methods of how New London could address the need to accommodate housing for people who work in Town. Combining the response categories of significant and very significant, the following alternatives all received a majority of support:

- expand opportunities for "mother-in-law" apartments (71.8%);
- expand opportunities for rental units (55.9%);
- encourage housing over businesses in the Commercial District (55.3%);
- permit conversion of single family homes into multiple units in New London village; and
- provide a density increase for workforce/affordable housing.



Question # 13: Please indicate your level of support for the following methods of how New London could address the need to accommodate housing for people who work in Town? (Please rate each method)									
Answer Options	Very Supportive	Supportive	Neutral	Unsupportive	Very Unsupportive	Don't Know	Rating Average	Response Count	
Expand opportunities for "mother-in-law" apartments	26.9% (120)	44.8% (200)	17.3% (77)	5.8% (26)	3.4% (15)	1.8% (8)	3.807175	446	
Provide a density increase for workforce/affordable	16.8% (75)	33.6% (150)	19.5% (87)	13.2% (59)	12.1% (54)	4.9% (22)	3.149888	447	
Expand opportunities for rental units	16.5% (74)	39.4% (177)	23.8% (107)	10.7% (48)	7.6% (34)	2.0% (9)	3.405345	449	
Permit conversion of large single family homes into	18.7% (85)	34.3% (156)	19.6% (89)	14.7% (67)	11.6% (53)	1.1% (5)	3.303297	455	
Encourage housing over businesses in the Commercial	17.3% (78)	38.0% (171)	26.2% (118)	10.7% (48)	6.0% (27)	1.8% (8)	3.446667	450	
Zone additional areas served by water & sewer for	18.9% (85)	25.4% (114)	20.0% (90)	18.7% (84)	14.5% (65)	2.4% (11)	3.082405	449	
Encourage infill & redevelopment projects in the	14.8% (66)	23.0% (103)	24.8% (111)	12.5% (56)	12.3% (55)	12.5% (56)	2.778523	447	
Comments:								47	
								answered question	456
								skipped question	59

## Housing Goals

The Planning Board developed the following housing goals based on input received from public meetings on updating the Master Plan, feedback compiled from the results of the Community Survey and considerable discussion among board members.

1. Encourage the provision of a safe, adequate and affordable supply of housing for residents of all income levels.
2. Provide housing opportunities to attract a more balanced mix of resident age groups.
3. Assist households and individuals with special housing problems to attain suitable housing, including the senior, handicapped, minorities, low and moderate income persons, young families, and large families.

## Description of Housing Characteristics

Concentrations of a mix of housing types exist in the villages of New London and Elkins. In addition, all the lakes and ponds in Town, except Clark Pond, are surrounded by predominantly seasonal and year-round single family residences with comparatively small lot sizes. Outside of these areas, the pattern and type of residential development is low density, single family housing. These patterns become evident in viewing the Current Land Use Map, found in the Land Use Chapter.

### Type of Housing Units

Between 1980 and 1990, the total number of housing units in New London increased 21%, as shown in Table IX-1 (Page 155). The total number of housing units in New London increased another 15.4% between 1990 and 2000. In both decades, the largest number increase was in year-round occupied units.

of affordable housing in its land use regulations. New London's land use regulations do make reasonable opportunities available for the development of affordable housing, including:

- manufactured (mobile) homes are permitted in all residential districts as single family residences. The Zoning Ordinance defines a "Manufactured Home" as any Structure, transportable in one or more sections, which, in the traveling mode, is 8 body feet or more in width and 40 body feet or more in length, or when erected on site, is 320 square feet or more, and which is built on a permanent chassis and is designed to be used as a dwelling with or without a permanent foundation when connected to required utilities, which include plumbing, heating and electrical heating systems contained therein.
- the R-1 Residential District permits a minimum lot size of 20,000 square feet and a population density of one family per 10,000 square feet when the lot is served by public water and sewer;
- the Commercial District permits a population density of one family per 10,000 square feet;
- two-family residences are permitted in the R-1 Residential District, the R-2 Residential District, and the ARR Agricultural & Rural Residential District;
- multi-family residences (lodging and apartment houses) are permitted in the Commercial District;
- cluster developments permitting single and two-family dwellings with provisions for reduced lot sizes are permitted in the R-1 Residential, the R-2 Residential, the ARR Agricultural & Rural Residential, and CON -Conservation Districts; and
- Planned Unit Developments served by public water and sewer which allow single family, two-family and multi-family dwellings with provisions for reduced lot sizes are permitted where served by gravity sewer service in the R-1 Residential, the R-2 Residential, and Commercial Districts.

The major obstacle to development of affordable housing in New London is economics. The land costs are prohibitive even with districts permitting smaller lot sizes. The Habitat for Humanity has purchased and developed three residential lots off Pingree Road for the explicit purpose of constructing affordable homes for those in need. Through the financial arrangements with the low and moderate income purchasers of these homes, they have controlled the amount of equity inflation these people can benefit from with the goal of maintaining these homes as affordable. Another challenge in providing affordable housing is maintaining the affordability of the housing units after they have been constructed. As noted above for the homes constructed by the Habitat for Humanity, the amount of equity inflation the purchasers of these homes can accrue is controlled through financial arrangements with the purchasers. Another approach is to control the affordability of the housing units through subsidized housing.

#### *What Determines Housing Affordability and Who is Affected?*

The primary factors that determine housing affordability are the supply and price of housing, available income, and general housing market trends. Local wages need to support local housing costs. When housing costs rise and wages are reduced, wages increase slower than rapidly rising cost of housing, or jobs are cut, working residents may be forced to move to other areas to find suitable wages and affordable housing. Also affected by affordability are the senior and other residents on fixed incomes, young residents leaving home to start their own households, and other low- to moderate-income residents. Changes in demographics such as a decreasing young adult population indicate that existing resident families or individuals are moving away from Town. The gap in housing affordability is reflected by growth in nonresident, seasonal owners, and/or growth in new residents with higher-than-average incomes.